FROM DAUPRAT TO BERLIOZ: THE ORIGIN OF BERLIOZ'S ORCHESTRAL HORN WRITING

by

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To Paton and Hazel Yoder

and

Mose and Mattie Schrock

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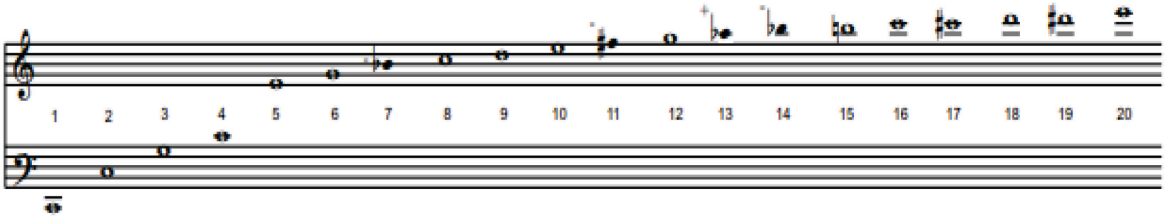
Chapter 1: INTRODUCTION TO THE NATURAL HORN

The notes of the harmonic series available to the natural horn (horn without valves) are referred to as natural or open notes. The length of the mostly conical tubing determines the pitch of the fundamental and ensuing harmonic series. These natural notes were all that was available to horn players until the latter half of the 18th century.

Figure 1-1: Harmonic series through the 20th partial[1]



During the second half of the 17th century the French hunting horn was known as a *cor de chasse*. It was a *cor à plusieurs tours*, or a horn with several turns. The French hunting horn was variously coiled one or more times, and some of them could be comfortably played up to the 12th harmonic.[2]

As horn designs were modified, the length, bore and bell sizes increased, and horn makers developed crooks and couplers (detachable tubing of different lengths) to allow the horn player to change the pitch of their horn. The horn began to make its way into orchestras and develop as a solo instrument. Composers in the late Baroque and early Classical periods tended to write solo and chamber works utilizing the available upper harmonics, as the natural notes are closer together in the higher tessitura and so the horn was more fully able to play melodically in its upper range.

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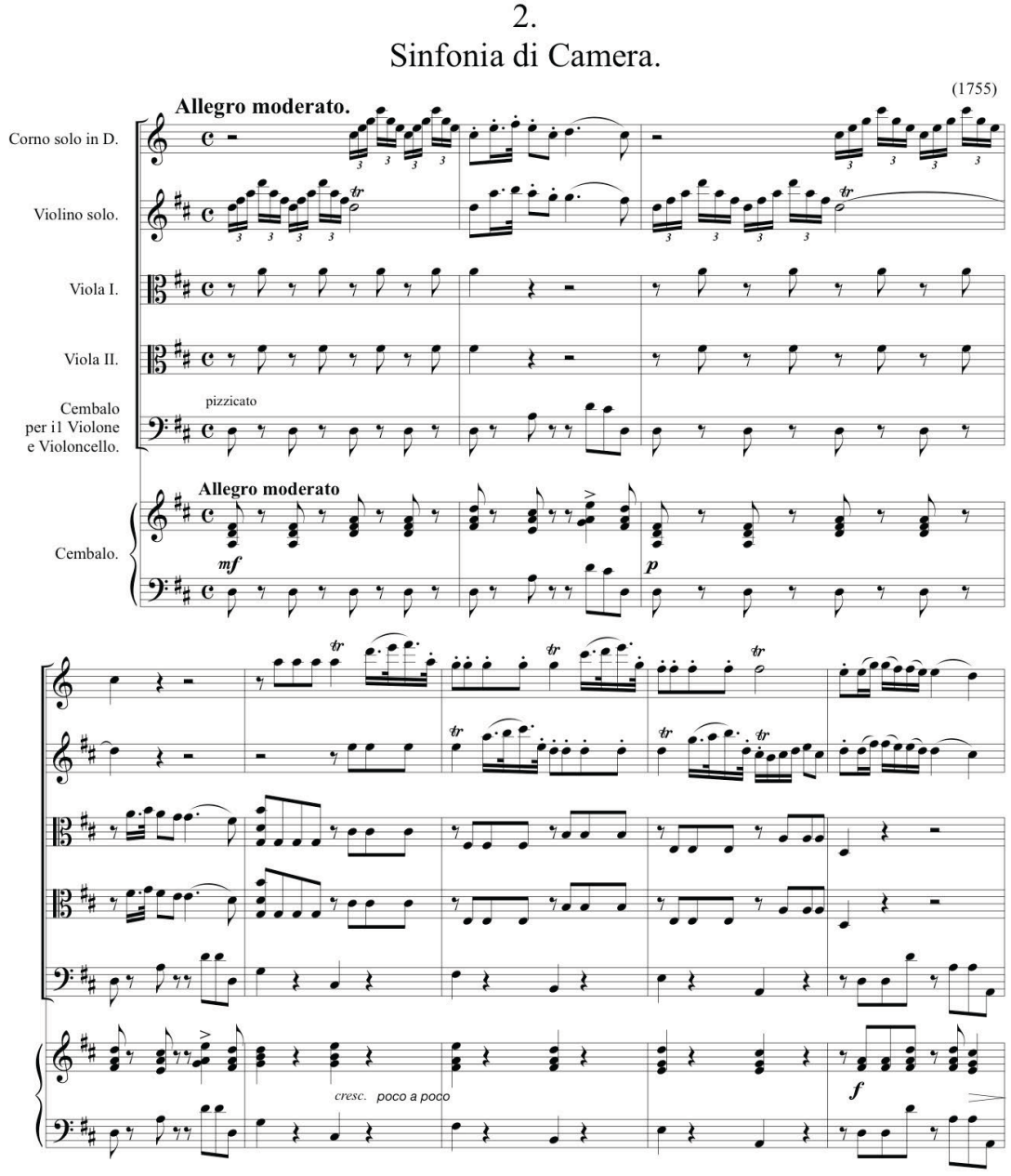
[1] Black notes indicate the most out of tune harmonics.

[2] Anthony Baines, *Brass Instruments: Their History and Development* (New York: Dover Publications, 1993), 152.

Leopold Mozart, in his *Sinfonia di Camera* (1755), had the natural horn in D ascending to the 22nd harmonic.

Example 1-1: The opening of Leopold Mozart's Sinfonia di Camera.



While some horn players were able to master the extreme upper range of the horn, many also began to look for a solution to the lack of chromatic ability in the more playable range of the horn. Hand stopping was a method of using the hand within the bell of the horn to partially or fully occlude the bell.[3] This allowed players to sound notes in between the already available harmonics and began to evolve as a technique to solve this problem. Hand stopping made substantial portions of the natural horn range mostly chromatic; horn players were now able to play melodic lines in the middle register and fill in some gaps in the lower tessitura.

Using the hand to completely occlude the bell allows the player to lower the pitch of any open harmonic. When playing on a horn crooked in the middle range of F, E, Eb or D, hand stopping the bell will lower the pitch of a harmonic to approximately ½ step above the next lower harmonic. Hand stopping on shorter horns will not lower the pitch quite as much, and on longer horns, the pitch will be lowered more. Stopping of the bell to lesser degrees will yield pitches in between the harmonic and the fully stopped ½ step above the next lower harmonic.

The sound of a stopped note is more veiled and muted than that of an open harmonic. Natural horn players learned to moderate the differences in sound between open notes and those requiring some degree of hand stopping by adopting a resting hand position further in the bell and playing open notes with less force. The learning and refinement of hand stopping technique in the mid to late 18th century brought the horn into a much more prominent position both within the orchestra and as a solo instrument.

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[3] Louis François Dauprat referred to these notes as factitious notes, while Hector Berlioz used the term *bouché*, or stopped.

Chapter 2: THE "FRENCH" HORN: HISTORY, FORM AND FUNCTION FROM 1650-1780

The French School of horn playing owes its roots to the influence of Bohemian and Austrian horn players, makers, and patrons. When the *cor de chasse* was brought from France to Bohemia and Austria, the instrument design and playing technique were modified significantly before re-entering France again less than a century later.

In France, the instrument maker family by the name of Chrétien was known for making high-quality trumpets, kettle-drums and hunting horns from around the beginning of the 17th century to the beginning of the 18th century. The Raoux family began making trumpets and horns around 1685 and passed the craft from father to son until the business was sold in 1857.[4] In the 16th and 17th centuries, they began to modify the design by lengthening the tubing to give the instruments access to more partials. This enabled the horn to move from mainly rhythmic signaling to more melodic playing.[5] In this way the French *cor a plusiers tours* (horn of several turns) and later the *cor de chasse* began to shift from pure utilitarianism to include the function of entertainment as part of the spectacle of the hunt.

It was this sound that so captivated the Bohemian Count Franz Anton Spörck (1662-1738) as he hunted with French noblemen during his tour of continental Europe in 1680. After hearing the hunting horn in France, he arranged for two of his servants, Wenzel Sweda (c. 1638-

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[4] Reginald Morley-Pegge, "The Orchestral French Horn", *Waits Wind Band Horn*, Vol. VII of *Hinrichsen's Musical Year Book* (London: Hinrichsen Editions Limited, 1952), 201.

[5] Horace Fitzpatrick, *The Horn and Horn-Playing, and the Austro-Bohemian Tradition from 1680 to 1830* (London: Oxford University Press, 1970), 3.

c.1710) and Peter Röllig (C. 1650-1723) to be trained to play these horns. Sweda and Röllig are credited with helping to disseminate the skill throughout Bohemia and Austria.[6] They returned to Bohemia with several horns from Paris. This French model of horn with ongoing modification began spreading through Europe. By 1703 the Leichnambschneider brothers in Vienna had modified the French hunting horn significantly, increasing bore and bell size.[7]

As the horn was physically modified, the techniques for playing it changed as well. Anton Josef Hampel (born in Prague c. 1710) is reported by Heinrich Domnich to have discovered hand stopping during his time in Dresden.[8] Hampel's horn method, edited and published by Giovanni Punto, makes no mention of hand stopping. But it is clear from examination of the method that some knowledge of the technique is required to play the exercises within.[9] It is not known with certainty who originated the practice, but clearly Hampel was not the only horn player to have developed this technique during the first half of the eighteenth century.[10]

Around 1750, Hampel worked with Johann Werner (also of Dresden) to modify a terminal crook design so that the crooks were incorporated into the body of the horn. They called this instrument an Inventionshorn. By moving the crooks to the body of the horn, it enabled the player to always have the mouthpiece the same distance from the body of the instrument, and to

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[6] *Grove Music Online*, s.v. "Sporck, Count Franz Anton," http://www.oxfordmusiconline.com.proxyiub.uits.iu.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000026461 (accessed February 3, 2018).

[7] Fitzpatrick, *The Horn and Horn-Playing*, 33.

[8] Heinrich Domnich, *Méthode de Premier et de Second Cor* (Paris: Le Roi, 1808), iii-iv.

[9] Anton Joseph Hampel and Giovanni Punto, *Seule et vrai méthode: pour apprendre facilement les élémens des premier et second cors aux jeunes élèves, dans laquelle sont indiquer les coups de langue et les liaisons les plus nécessaires pour tirer les beaux son de cet instrument* (Paris: H. Naderman, 1798).

[10] Reginald Morley-Pegge, *The French Horn: Some Notes on the Evolution of the Instrument and of Its Technique*, 2nd ed. (London: Benn, 1973), 87.

always be able to reach the bell of the horn easily to enable hand stopping. It is probable that this early Inventionshorn used socket and tenon joints to attach the crook to the body of the horn.[11] While this type of joint served well for a single point of contact using terminal crooks, it was not very rugged engineering for the two joints required for the crook attached in the middle of the horn.[12] In addition, there was still no method for tuning the horn. The ability to tune the horn followed, as Johann Gottfied Haltenhof of Hanau made a significant improvement by changing the socket and tenon joints to slides,[13] thus enabling tuning and making changing crooks on the Inventionshorn much easier. Haltenhof's work is dated by Johann Nepomuk Forkel to around 1776, six years prior to his note on the Inventionshorn in *Musikalischer Almanach*[14] of 1782:

> The so-called *Inventionshörner*, in which the crooks are not placed right after the mouthpiece but in protruding sockets placed in the middle of the horn, were invented about six years ago. On these instruments and by means of this invention, one can embrace an entire octave [of different tonalities]. Initially this novelty cost from 60 to 80 thalers. Now, one can find *Inventionshörner* from 16 up to 20 ducats. The Viennese instruments of this type stand alongside those built in Hanau, and it is believed that one can not find better brass instruments than the ones produced in these two places.[15]

There is also an extant example of Haltenhof's work, an Inventionshorn utilizing a slide attachment mechanism and including a set of crooks, marked "MACHT IOHANN GOTTFRIED HALTENHOF IN HANAU AM MAYN 1776."[16]

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[11] Ibid., 21.

[12] Karl Bargans, "On the Trumpet, as at Present Employed in the Orchestra," *The Harmonicon* 8, no. 1 (1830): 23. Bargans mis-attributes the first *inventionshörner* to a horn builder in Hanau. He seems to switch around the locations of Hanau with Dresden in the article.

[13] Heinrich Domnich, *Methode*, v. Domnich states that Haltenhof was the first to apply the mechanism of the trombone slide to horn construction.

[14] Johann Forkel, *Musikalischer Almanach für Deutschland* (Leipzig: Schwickertschen Verlag, 1782), 105-6.

[15]Renato Meucci, e-mail message to author, June 3, 2018. Translation and discussion of topic provided by Renato Meucci

[16] Morley-Pegge, *The French Horn*, Plate IV, no. 1.

Hampel, a low horn player, performed in Dresden from 1737 until about 1768, first playing with high horn player Johann Georg Knechtel from 1737-1756. He then played with another famous high horn player, Carl Haudek, who performed in Dresden from 1747-1796. Both Hampel and Haudek were responsible for teaching many students from around Europe. One of the most famous students of Hampel was Jan Vaclav Stich (1748-1803), originally from Bohemia and later known as Giovanni Punto. Punto was a famous virtuoso who toured Europe, teaching and performing, utilizing hand stopping technique.

The unnamed author of *New Instructions for the French Horn*, published around 1780, was dubious about the new technique utilized by Giovanni Punto (a student of Hampel) and others:

> Should you want to make the Cromatic tones, you may hold the Horn with your Left or Right hand as near as you can to the Mouth-piece, the Bell to bear against your side, one hand must be within the Edge of the Bell ready to put into the Pavilion or Bell of the Horn as notes may require; but this will be better found out by Practise than it is possible here to describe; Mr. Ponto [sic] and many others, famous on this Instrument, constantly uses this method, by which means the half tones are expressed, which is not to be done by any other method; but it is deemed by Judges of the Horn that the principle beauty, the Tone, is greatly impaired thereby.[17]

While there were naysayers, hand stopping technique was a very important innovation for horn players, and they discovered methods to create a beautiful and fluid sound. In this way, solo and orchestral music composed for horn was able to utilize a much wider span of the horn range.

There were numerous Austrian and Bohemian soloists that helped re-introduce the modified French horn and the new technique of hand stopping to France prior to 1800.[18] Jean-

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[17] *New Instructions for the French Horn* (London: Longman and Broderip, ca. 1780), 4.

[18] Birchard Coar, "A Critical Study of the Nineteenth Century Horn Virtuosi in France." (PhD diss., University of Edinburgh, 1952), 3.

Joseph Rodolphe (1730-1812), an Alsatian born in Strasbourg, was a performer on violin and horn and a composer. He performed on horn in Paris in 1764, being one of the first virtuosi to introduce this new horn sound. It is thought that he evolved a technique for hand stopping independently of Hampel and was probably the first to advance the technique to concert-goers in Paris. Ignaz Leitgeb (ca. 1745-1811), W. A. Mozart's friend and the player for whom Mozart wrote his horn concerti, performed for a Paris audience in 1770. Giovanni Punto made his appearance in France in 1778, bringing all the refinement and agility hand stopping technique had to offer. This sound was new and was quickly embraced by the French: "Suddenly, they discovered the velvety smooth sound of the Viennese horn, enhanced by the instrumentalists of the Bohemian School. It was a revolution, from which emerged the entire French school of horn playing."[19]

[19] Georges Barboteu, "The Evolution of the Horn in France and Its School," *The Horn Call* 6, no. 2 (May 1976): 34.

Chapter 3: THE PARIS CONSERVATOIRE: THE INTERSECTION OF DAUPRAT AND BERLIOZ

Any discussion of Louis François Dauprat (1781-1868) and Hector Berlioz (1803-1869) must include the main point of intersectionality between them: the Paris Conservatoire. Dauprat's early musical training and the beginnings of the Conservatoire are inextricably entwined. The lives of both men as students of composition and then later as employees of the institution show their shared experience.

The establishment of the Conservatoire can be traced to two institutions, the École Royale de Chant et de Déclamation and the École pour la Musique de la Garde Nationale. The École Royale de Chant et de Déclamation was established by decree of Louis the XVI in 1783. The school was tasked with training students in singing, solfege, speech, grammar, harpsicord and accompaniment, dancing, and fencing.[20] François-Joseph Gossec was the school administrator. The goal was to supply well-trained singers for the King's royal entertainments, including the opera. Jean-Joseph Rodolphe, a virtuoso horn player, violinist, and composer, was among the earliest composition teachers at the École Royale de Chant. His solfege method, *Solfège ou Nouvelle méthode de musique* (1784) was in use for the whole of the 19th century. He was a great musician and horn player who realized how important a vocal approach was to the study of music in general and to horn specifically.[21] Rodolphe lost his teaching position during

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[20] Susan Rekward, "The Horn at the Paris Conservatoire and its *Morceaux de Concours* for Horn" (Master's thesis, University of North Texas, 1997), 4.

[21] Birchard Coar, "A Critical Study", 1.

the Revolution but would later become a professor of solfège at the Conservatoire from 1798-1802.[22]

When the revolution began in 1789, the only way the École Royale de Chant managed to survive was to pledge loyalty to the new Republic. In 1791, Gossec drew up a plan for a reorganization of the school. His rationale for funding the school fit in with nationalistic feelings prevalent at the time.

> Foreign musicians, without attachment to our country, will corrupt our language and distort our taste. Delicate ears will at first be offended, but long usage will force those who have even the most decided taste to accustom themselves to it. It is therefore advantageous, or better said necessary, that we have a truly national music, and for that to successfully happen we need an Academy of Music. [23]

The onset of the French Revolution was sudden, but the driving forces behind it were long in the making. France had made costly contributions to the American Revolution, and King Louis XVI and his predecessor had managed to drain the royal coffers with indiscriminate spending for many years. The combination of heavy taxes, recent poor harvests and drought were tinder for the fire of revolution. The urban poor and peasants began going on strike, rioting and looting. July 14, 1789 brought the storming of the Bastille as the populace secured the gunpowder and ammunition stored there. Looting and burning houses of whomever the populace deemed the ruling elite continued as the Revolution picked up energy. The Legislative Assembly was established as a governing body, and they wrote and adopted the Declaration of the Rights of Man and of the Citizen. The Declaration set forth a system based on four things: equal

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[22] *Grove Music Online*, s.v. "Rodolphe, Jean Joseph," http://www.oxfordmusiconline.com.proxyiub.uits.iu.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000023646 (accessed Feb. 10, 2018).

[23] Constant Pierre, *Le Conservatoire national de musique et de déclamation: documents historiques et administratifs* (Paris: Imprimerie Nationale, 1900), 46. Translation by Mary Ellen Meyer.

opportunity, freedom of speech, popular sovereignty, and representative government. During this time (1789-93) the Legislative Assembly established a constitutional monarchy.

The more extreme voices of the Revolution began to take power, and in 1792 the French Republic declared war on Austria and Prussia, and the Legislative Assembly was replaced by the National Convention. King Louis the XVI was arrested and in 1793 he was beheaded and the Reign of Terror began. In a period of just ten months, over 35,000 people were killed as enemies or suspected enemies of the Republic.[24] After Maximilien de Robespierre (the man responsible for ordering many of the executions during the Reign of Terror) was himself executed, the moderates began to regain control, and the Reign of Terror ended. In 1799, General Napolean Bonaparte led a coup d'état and declared himself First Consul. This effectively ended the revolution begun ten years earlier.

The upheaval of the French Revolution gave birth to another music school, begun by a military officer, Bernard Sarrette. He initially formed La Musique de la Garde Nationale Parisienne, a group of National Guard musicians that performed at celebrations and military functions of the Republic. Sarrette, along with other musicians from the National Guard, became the core of the École pour la Musique de la Garde Nationale, created in 1792. This music school was formed to provide free musical education to children of citizen National Guard members. In 1793, Sarrette made the financial decision to petition the National Convention to place the École pour la Musique de la Garde Nationale under national control instead of under the auspices of the city of Paris. The decision was made to merge the École Royale de Chant et de Déclamation with the École pour la Musique de la Garde Nationale to form the Institut National de Musique in

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[24] Ian Davidson, *The French Revolution: from Enlightenment to Tyranny* (New York, Pegasus Books, 2016), 198.

1793. With these changes Sarrette's original school shifted from a city-sponsored entity to a national institution that now included both instrumental and vocal musical studies.[25]

It was during this time that Louis-François Dauprat became a student at the Institut. Born in 1781, Dauprat grew up as a choir boy at the Notre Dame Cathedral. This typical musical education within the sacred realm of a church was ended by the Revolution. All church-sponsored schools and ensembles were terminated. At the age of thirteen he enrolled in the Institut and studied horn with Joseph Kenn. Kenn was a talented cor basse player and teacher who performed with the Opera in Paris from 1788-1808.[26] While Dauprat was a student at the Institut, there was still a great deal of upheaval and organizing occurring as France's National Convention struggled with their new government and a limited budget. Even though Sarrette was the head of the school and its main supporter and promoter, he was twice arrested; the first arrest for being "unpatriotic", and the second because his name was on a national list of terrorists.

In 1795 the National Convention changed the name of the school to the Conservatoire National de Musique et de Declamation and ratified a plan of organization for the institution. The charter granted up to one hundred-fifteen teaching positions and the maximum number of students was set at six hundred.[27] François-Joseph Gossec was the Lieutenant Master of Music at the new school, but Sarrette was appointed Director (Commanding Captain.) Sarrette articulated the educational mission of the school, which was adopted based on the idea that music bettered the populace and hence was useful to society. His address at the opening of the Conservatoire in 1796 shows his desire to join academy and conservatory together in supporting a French national musical tradition:

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[25] Constant Pierre, *B. Sarrette et les Origines du Conseratoire National de Musique et de Déclamation* (Paris: Delalain frères, 1895), 44.

[26] Ibid., 37.

[27] Ibid., 127.

> Regulations must not be limited to organizing the institutions indispensable to the study of the general theory of music; they must also furnish to that practice [the study of music] the means of transmitting useful lessons of experience. It is necessary, through technique honed in special exercises, that the musician may understand and make known to his colleagues in the arts, the works which honor his own.
>
> These works, in impressing the idea of beauty, will stimulate young composers to emulate them; they will aid in the development of their genius, and will create works worthy to honor the school that is established. [28]

The basic organizational unit at the school was the studio of each professor, and studies were generally separated into singing, playing, and composing. Each student had to take a highly competitive audition to obtain entrance to the Conservatoire, and once admitted they stayed until such a time as they won a prize or were dropped from the school.[29] Dauprat studied at the school (in its various forms) from 1794 to 1797, being the first horn student to win a *premier prix*.[30] Students were judged publicly during their playing examinations (called *Concours*), including sight-reading and an assigned piece for the instrument. The awards available were one of the following designations: first prize (*premier prix*), second prize, and first or second certificate of merit. It was the practice at the Conservatoire until 1817 to award a material prize when a student won a *premier prix.* Dauprat's prize was a silver-mounted *cor-solo* made by the famous instrument-maker L.-J. Raoux.[31]

Students were required to perform in a large ensemble (chorus or orchestra) depending on their instrument. Pupils took rigorous courses in sight-reading, solfege, music theory, and music history and performed publicly with their large ensemble as required. These public concerts and

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[28] Ibid, 187. Translation by Mary Ellen Meyer.

[29] D. Kern Holoman, "The Paris Conservatoire in the Nineteenth Century," *Oxford Handbooks Online.* http://www.oxfordhandbooks.com.proxyiub.uits.iu.edu/view/10.1093/oxfordhb/9780199935321.001.0001/oxfordhb-9780199935321-e-114 (accessed January 23, 2018).

[30] Pierre, *Le Conservatoire*, 641.

[31] Morley-Pegge, *The French Horn,* 158.

military celebrations were an important part of the life of the city. The Conservatoire had given *prix* winner concerts since 1797, but in 1800 the first pupils' concert was given. From that point forward, five to twelve concerts were given each year from winter to early summer. The Conservatoire orchestra was made up of about 60 students and teachers. These concerts continued in some form until 1824.[32] Previously in 1791-92, laws were passed that made it legal for anyone to open a public theater. This in turn fostered myriad new theatrical phenomena of varying qualities. By 1807 however, Napoleon had reduced the number of legal theaters to eight, thus ensuring a higher level of quality and moral standard.[33] While concert performances in Paris usually took place in theaters, the first concert hall specifically designed for that purpose was constructed in 1811 for the Conservatoire. The Salle des Concerts du Conservatoire was built in the form of a "U" with the stage across the straight end and had a capacity for 1055 persons.[34]

After Dauprat left the Conservatoire, he traveled with several military bands. Upon his return he re-enrolled at the Conservatoire in harmony under Professor Catel. After completing the harmony class, he was admitted to Gossec's composition class and finished coursework by 1805. Later he again enrolled in composition at the school, this time with Anton Reicha. Dauprat became solo horn at the Grand Theatre of Bordeaux from 1806-1808. In 1808 he succeeded his horn teacher Kenn as *cor basse* at the Paris Opera. Nine years later, Frédéric Duvernoy (another horn professor at the Conservatoire) retired as solo horn at the Opera and Dauprat was selected to replace him. The Opera was the pinnacle of music performance in Paris and boasted a large

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[32] *Grove Music Online,* s.v. "Paris," http://www.oxfordmusiconline.com.proxyiub.uits.iu.edu/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000040089 (accessed Feb. 1, 2018).

[33] Ibid.

[34] Ibid.

orchestra of around 70 instrumentalists "owing its fame not least to soloists like Baillot, Gustave Vogt, and Dauprat."[35]

In 1814 the Conservatoire closed for a time. This was a direct result of the Bourbon Restoration, which caused much upheaval and change in France. In 1814 Napoleon abdicated, and the brothers of the executed King Louis XVI came back to power and pursued a highly conservative governance. It followed logically that the Conservatoire, having been so closely aligned with the Revolution, closed during this transition. Bernhard Sarrette was let go from his post as Director and did not again regain an influential position. The Conservatoire, re-named the École Royale de Chant, re-opened in time for the beginning of the fall term in 1816.

It was at this time that Dauprat joined the horn faculty full time at the school. He would teach 26 years, finally retiring in 1842. During his tenure, the student concerts continued until 1824. Four years later François-Antoine Habeneck, a talented violinist born in the same year as Dauprat, started the Société des Concerts du Conservatoire in 1828. Current and past students of the Conservatoire (including Dauprat) made up the orchestra. There were six annual concerts given. At least initially, a large part of Habeneck's purpose in forming the orchestra was to bring Beethoven's music to France. The very first performance included Beethoven's *Eroica*.[36] In D. Kern Holoman's book on the Société, he talks about the impact of the concert series on both the public and contemporary composers:

> It would be difficult to overstate the degree to which this concert, and the five that followed before the first 'session' of 'exercises' reached their end, altered the course of music in France and eventually throughout Europe… The young Berlioz, just then succumbing to the throes of nascent Romanticism, found both the direction of his career and the scope of his imagination radically changed by what he heard in the first seasons… Every French composer from Berlioz

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[35] Ibid.

[36] Ibid.

> through Messiaen and Boulez was formed, at least in part, by what he or she saw and heard in the Salle des Concerts.[37]

The young Hector Berlioz was moved by many performances he heard in Paris. He went to the city to pursue medical studies, as per the wishes of his father. Beginning medical school in 1821, Berlioz attended his studies while taking in the musical offerings of the city. He first experienced the Paris Opera as they were presenting a performance of Antonio Salieri's *The Danids* in 1822. Berlioz states in his *Memoirs* after attending the opera, "It was as though a young man possessing all the instincts of a sailor, but knowing only the boats on the lakes of his native mountains, were suddenly to find himself on board a three-decker ship on the open sea. I hardly slept that night, and the anatomy lesson the next morning suffered accordingly."[38] Dauprat would have been playing horn both at the Opera performances and in the Société concerts that so affected Berlioz.

Among the accomplishments of the Conservatoire at the beginning were the many methods published, the unparalleled training of incredibly talented instrumentalists, and the founding of a music library that was free and open to the public.[39] Berlioz discovered the music library at the Conservatoire in 1822 and began to spend time there copying out and studying Gluck scores. (It was during one of his visits to the library that he reportedly enraged Cherubini by using the wrong entrance and by not revealing his name when asked.)[40] He eventually began private composition studies with Jean-François Lesueur and began composing his own music. Berlioz dropped his medical studies and enrolled full-time as a student at the Conservatoire in

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[37] D. Kern Holoman, *The Société des concerts du conservatoire, 1828-1967* (Berkeley: University of California Press, 2004), 5-6.

[38] Hector Berlioz, *The Memoirs of Hector Berlioz*, trans. David Cairns (London: Everyman's Library, 2002), 22.

[39] *Grove Music Online,* s.v. "Paris".

[40] Berlioz, *Memoirs*, 34-36.

1826. He concurrently studied composition with Lesueur and counterpoint and fugue with Anton Reicha. Dauprat had studied with Reicha earlier, and beginning in 1815, was the horn player in the woodwind quintet that first performed Reicha's twenty-four woodwind quintets.

Just prior to Berlioz' enrollment as a Conservatoire student, Dauprat completed and published his monumental three-volume treatise, *Method for Cor Alto and Cor Basse* in 1824. The first two volumes were published together as a method book for horn students, while the third volume was meant for composers and was sold separately. It was an expectation of the Conservatoire that professors would write methods that helped elucidate and promote an expressly French style of teaching and performance practice. According to Holoman, "through these publications (and through live appearances of the musicians outside France), the Conservatoire label became internationally recognized and thus aggressively sought…"[41] Dauprat's exhaustive method would have been a part of the Conservatoire's library holdings as Berlioz was exploring its shelves a few years later. Dauprat retired from teaching at the Conservatoire in 1842 and died in 1868.

As a student Berlioz finally won the *Prix de Rome* (the most coveted award for the competition in composition at the Conservatoire) in 1830 on the fourth attempt. His struggle to earn both money and recognition during his life was a difficult one. While he spent many years earning money by writing music criticism, his only permanent employment was the job first as assistant librarian and then as head librarian at the Conservatoire, beginning in 1839. He published his orchestration treatise in 1844, and in 1850 Bottée de Toulmon, the head librarian, passed away and Berlioz ascended to his position, which he held until his death in 1869.

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[41] Holoman, "The Paris Conservatoire".

Chapter 4: DAUPRAT'S *METHOD FOR COR ALTO AND COR BASSE*

Dauprat published his *Method for Cor Alto and Cor Basse* in 1824. The idea of publishing a method for horn was not new; it was a part of the expectations for professors at the Conservatoire. Fréderic Duvernoy's horn method was published in 1802, and Heinrich Domnich's in 1808. Duvernoy was an advocate of the *cor mixte* genre, a specialization in a narrower playing range that eliminated both the extreme lower and upper range of the horn. This created limitations often necessitating transposition and shifting to different octaves to keep orchestral horn music within the narrower range. This caused quite a bit of harmonic inversion and timbre changes. The benefit of the *cor mixte* was the ability to stay in the most beautiful and secure range of the horn and thus to reach the height of accuracy and beauty of tone. Domnich, as with most of the other professors of horn at the Conservatoire, preferred the idea of two genres or types of horn players. Hence his *Méthode de Premier et de Second Cor* advocated for a horn player to either specialize in playing in the upper two-and-a-half octaves of playing range, or the lower three octaves and a third. Domnich made space within his method to talk not only about technique, but also touched on musicality. Previously, most horn methods primarily discussed technical challenges, and then followed with many studies designed to perfect horn technique. Domnich led the way to a more holistic approach with his method, beginning to address musical expression by including a series of exercises to assist the student in understanding the melodic capabilities of the horn, not just the technical aspects.

Dauprat built on the work of Domnich, as he comments in Chapter Seven, Part Two of his *Method*:[42]

> While the purpose in writing this Method was to give a new direction to the study of the horn, one which we believe to be more suited to its nature, technique, and musical functions, and to enable students to make more rapid and secure progress, we have not intended to eclipse those Methods already in use for the instrument, and least of all, that of Domnich. If, then, we have given a new aspect to our work, arising from the system we have developed, and if we have presented a large number of exercises and observations on so many topics that have hitherto been omitted, but which we believe to be essential, we must also affirm with pleasure that when it comes to Domnich's advice to his students, it would be necessary to copy him verbatim to present it as well as he did.[43]

Dauprat's *Method* departs from previous authors in his unrelenting pursuit of musicality and sound. He believed that "the artists who played and taught these instruments, mostly foreigners…had been sacrificing the study of harmony and composition…to the development of superior technique."[44] It must also be said that Dauprat departed from previous authors in the sheer thoroughness and depth of his method which filled more than 450 pages.

The dedication of his treatise reads: "Composed for and dedicated to the Composers of the Department of Music of the Royal Academy of Fine Arts, Institute of France." The title page of his *Partition des Trios, Quatuors and Sextuors pour Cors en differens Tons* also mentions that the included tables and instructions that precede his compositions are "useful to composers."[45] Dauprat's mission was, then, twofold. He was utterly dedicated to teaching and mentoring the

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[42] Dauprat's *Method* was published in three volumes. For this study I will use Viola Roth's English translation of Dauprat's text, which is published with all three volumes together. Roth's page numbers are used, found in brackets [ ] at the bottom of each page.

[43] Louis François Dauprat, *Method for Cor Alto and Cor Basse: Complete English Translation of the First Edition Published by Zetter, Paris, Ca. 1824 ; Music Reproduced in Facsimile*, trans. Viola Roth (Bloomington, Ind: Birdalone Music, 1994), 321.

[44] Ibid, 5.

[45] Louis François Dauprat, *Partition des Trios, Quatuors & Sextuors pour Cors en diffŕents Tons: précedée de Tableaux et Instructions sur les deux Genres du Cor* (Paris: Chez lÁuteur, 1815?), title page.

best and brightest horn players in France while presenting the natural horn and its myriad capabilities to any composer he could reach.

In Dauprat's preface, he shows definite national pride in the musical abilities of the French people. He believes the talent of French instrumentalists better showcases the quality of German music, and French singers are clearly equal to the Italians of the day. He also notes the "deadly introduction of the *mixte genre*"[46] as a reason to continue to push forward and expand the capabilities of the horn to combat the shrinking range and abilities that genre engendered.

Dauprat states in his preface that in the First Part of his *Method* he covers what a student needs to know to form sounds on the horn, and then follows with thirty lessons. There are sixteen chapters before he introduces the first lesson with exercises.

The first several chapters cover the horn's form and function, crooks, and the "changes and improvements" he does not agree with. He discusses how the keyed trumpet has been adulterated by these types of changes, indicating that the sound is so different from the natural trumpet that he considers it an all-together different instrument. Dauprat is against these modifications for horn, saying:

> It would lose its character and the true quality of its natural and factitious sounds. Most of these latter have a charm that is particularly theirs, and which serve, so to speak, for shadings and nuances in contrast with the natural sounds. It must then be presumed that, far from gaining by their complete removal, the horn would lose a great deal. And what is said here about the various sounds of the complete range of the instrument must obviously extend to the different crooks. Each of these, taken by itself, has its own color, its timbre, and its special character; but if they were all combined in a single assembly, becoming but one and the same instrument, this instrument would certainly have, if you will, the same range of low, high, and middle sounds. However, the more the new inventions produce equality among all the sounds, the more the characters, colors, and timbres of the individual crook would be distorted and confused.[47]

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[46] Dauprat, *Method*, 6.

[47] Ibid, 13.

Dauprat then discusses the *cor alto* and *cor basse* genres and makes his case for why they should not be called first horn and second horn (although this nomenclature did not catch on.) He was a *cor basse* and therefore disinclined to play "second" to the "first". The *cor alto*'s primary role was to sing on the horn, while the *cor basse* was more agile, covering rapid arpeggiations and middle range melodic functions.[48] Making sure to cover all of the aspects of horn playing, Dauprat then offers some practical advice on how to clean and empty the horn of condensate, provides detailed descriptions of the mouthpieces for *cor alto* and *cor basse*, choice of the Eb crook for first lessons, posture and holding the instrument, shape of the hand in the bell, and excellent description of mouthpiece placement.

Dauprat moves on to discuss sound production. There are three qualities of sound he discusses: pitch, intensity, and timbre. To assist the student in producing pitches, there ensues a long chapter on natural and factitious sounds and instructions as to how they are indicated (similar to fingerings) in the following lessons. Finally coming up to the first lesson and exercise, Chapter 15 deals with intonation on the horn, and continues the topic into the following chapter, stating, "This instrument, lacking both holes and keys at strategic positions, always produces the sounds its player has conceived. This means they will be true or false, according to whether the judgment of his ear serves him well or badly."[49] As hand stopping is slightly different on each crook, each person's hand size is different, and in addition bell size and key of the music differ, Dauprat advises us to let our ear be the guide for how we use our hand in the bell to produce factitious notes.

Throughout Dauprat's *Method*, there are separate lessons for *cor alto* and *cor basse*. He is not delicate or slow with his introduction of the range of the horn; the First Lesson for *cor alto*

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[48] Ibid, 16.

[49] Ibid, 36-37.

extends up to the 18th harmonic, and the Lesson for *cor basse* goes down to the factitious notes below the second harmonic. The full range for each genre is explored, and chromatic tones are introduced. The lessons proceed through scales, sustained notes, articulation, and different rhythms. The trill is introduced in Chapter 17, separated from and in advance of a later chapter on ornamentation, as the trill takes so long to perfect. There are three types of articulation presented: the *coulé* (slur), the *pointé* (articulated but not dry), and *détaché* (staccato). After a chapter on ornamentation, Dauprat presents twelve etudes, each with a prior explanation. Finally, he ends Part One with an exercise working on vocal themes and transpositions from the solfège method at the Conservatoire.

Part Two

Part Two is even more meticulous in its approach to teaching. Dauprat says: "The passagework collected in this Second Part is intended only to represent the different kinds of difficulties arising from the nature of the horn, which players must practice diligently and with constant perseverance."[50] It seems he leaves nothing to chance as he attempts to cover each possible situation that might call for a decision regarding articulation or musical expression. This is followed by many examples of passagework with explanations of which notes to actually hand stop, and which ones must just be implied or allowed to be out of tune because of the speed in which they occur. He discusses how to judge which articulation is needed, first addressing melodic lines. Dauprat underlines that the student must be able to distinguish accessory tones from main melodic tones to determine appropriate articulation. He talks about a "musical sentence" in reference to structure for cadences and indications of appropriate articulation and expression. It is quite wonderful to catch a glimpse of Dauprat in his analysis of his teacher's (Kenn's) duets. He first presents the *cor alto* part, and then discusses where he sees cadences,

[50] Ibid, 205.

points of rest, and how he would use these clues to decide on articulation and expression. It is a bit like having him commenting during a lesson, leading a student through his process to a clear and "correct" conclusion. He follows a similar course with the *cor basse* parts, describing in detail about how to interpret accompaniment parts. These first four chapters are followed by 41 pages of "patterns of passagework" for *cor alto* (330 exercises) and *cor basse* (360 exercises). Dauprat mentions that if the exercises are transposed, one would end up with close to 1000 exercises for each horn genre.

Dauprat's advice (and that of Domnich, to whom he refers with great respect) is timeless. "Practice little and often"[51] and include alternative studies that will make one not just a better horn player, but a better musician. He admonishes students of the horn to study varying styles of music and become expert on all the crooks, comparing natural and factitious notes on each crook to establish and maintain excellent intonation and evenness of sound.[52] Dauprat says that it is not enough to master the mechanics of the horn – it is not enough to become a great technical player. "One must also acquire the ability to play music better than others, as a result of having learned well its true character, intentions, and harmony. This knowledge enables one to vary the ideas of the music, expanding or reducing them as appropriate."[53] He encourages studies in composition to gain understanding of music and assist in interpretive abilities. Dauprat imparts that the true musician must always value whatever music is in front of them regardless of its relative importance to the whole. Love the music and give it your best abilities. (And treat colleagues well!)

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[51] Ibid, 321.

[52] Ibid.

[53] Ibid, 322.

Dauprat has very definite opinions in most of the subjects he addresses. A good performer must have the ability to use appropriate phrasing, play with the appropriate color, and perform music in the correct style. He insists that well-written music has only one correct interpretation. Musical expression may be true, false, or artificial. The musician must not fall into the trap of exaggeration or artifice or depart from a natural, graceful emotion.

Just prior to ending Part Two with a listing of appropriate repertoire and a discussion of how to conduct auditions and competitions, Dauprat addresses Chapter eighteen to teachers of horn. He says that horn teachers need patience, courage, and perseverance. His advice is timeless, as he advises having a student dissect and analyze any difficulties, stating that the art of reflection replaces the teacher when the student does not have access to a teacher.[54] Likewise, Dauprat speaks about the importance of knowing when a teacher must help a student to push through a difficulty, or when one must change an approach to a given issue. "Sometimes certain etudes, however appropriate they may be, will uselessly try a student's patience. This is not the time to needle him about perseverance. On the contrary, one must look for some detour, some other way, to lead him progressively and, so to speak, without his knowledge, to a solution of the difficulty which was troubling him."[55] Dauprat ends his advice to horn teachers and students by noting that an audience does not care if the piece is difficult. In the end, the listener is only interested in the results, not in the difficulty of playing the instrument or the specific piece. Therefore, it is the performer's responsibility to make the most satisfying performance possible, regardless of the hurdles involved.

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[54] Ibid, 357.

[55] Ibid., 356-7.

Part Three

"Part Three. For young composers. Instructions on the horn and its different crooks or interchangeable parts, on the resources of the instrument and the way they may be used in solos and in simple and obbligato accompaniment both of the voice and of other instruments, and in music for several horns, whether unaccompanied or within the orchestra."[56] While the first two parts of Dauprat's method primarily cover pedagogical concerns, it is the third part that speaks directly to compositional concerns regarding the natural horn. He begins by addressing the timbre and qualities of the twelve crooks. While there were only 9-10 crooks in common daily use at this time, Dauprat advocated for twelve crooks, to cover a fuller spectrum of colors and ranges. He talks about the characters of the crooks in three groupings.[57]

Table 4-1: Characters of crooks by group.

High Crooks	C alto, B^b alto, A, A^b	Joyous, lively, loud, brilliant
Middle Crooks	G, F, E, E^b	Combines sweetness with brilliance, vivacity with majesty
Low Crooks	D, C basso, B, B^b basso	Majestic, austere, religious, melancholy

Dauprat says, "It is by studying the effects of these varying timbres that a young composer, who is able to reflect on his art and on the resources players have made available to him, will come to know when to use them appropriately and how to create new effects."[58] He advises composers that the high and low crooks are primarily for accompaniment, while the middle crooks are well-suited for solo and obbligato parts and advises that any melody on one of the high crooks should

[56] Ibid., 369.

[57] Ibid., 371.

[58] Ibid., 373.

be limited to eight to twelve measures, to avoid the extreme fatigue that accompanies playing on the high crooks.

Dauprat refers the composer to the Grand Table that folds out from the back of the volume. It is packed with information. The table is almost four feet long in its original size and contains a stave for each crook including *cor alto* and *cor basse* ranges, all available notes, stopped and open, with the equivalent of fingerings (hand positions) marked for high, middle, and low crooks. There are many explanations about individual notes and the difficulties in sounding them well. As a note at the bottom of the large page, Dauprat also launches into a detailed discussion of why bass clef notation is written an octave lower than sounding pitch. Introducing the Grand Table to composers, he comments:

> Since the range of an instrument, its pitch, and its general playing technique are the most important things for a composer to know, they will be displayed in a Grand Table at the end of this book. Since each section of this Part refers, to a greater or lesser extent, to this Table, it will be well to have it readily available so it can be referred to when necessary. The remarks preceding the Table, which should be impressed on your mind, would suffice, if absolutely necessary, for those who do not possess this entire Method, since they could give composers a condensed but adequate understanding of the horn's capabilities. We have here given particular attention to the use of the horn in all likely situations, the way it has been used up to the present, and the way in which new resources can be placed at the disposal of the composer.[59]

In discussing historic ways of notating music for the horn, Dauprat expresses the opinion that some methods of notation are more difficult for the player than others:

> They [the players] would have needed to be able to manipulate the whole system of key signatures backwards and forwards – its naturals, flats, and sharps changing their natures to suit each situation. Indeed, these transpositions of clefs, scales, and key signatures would need to be made as swiftly as short notes pass in a swift tempo: operations which seem to us to be, if not impossible, then at least very difficult.[60]

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[59] Ibid., 370.

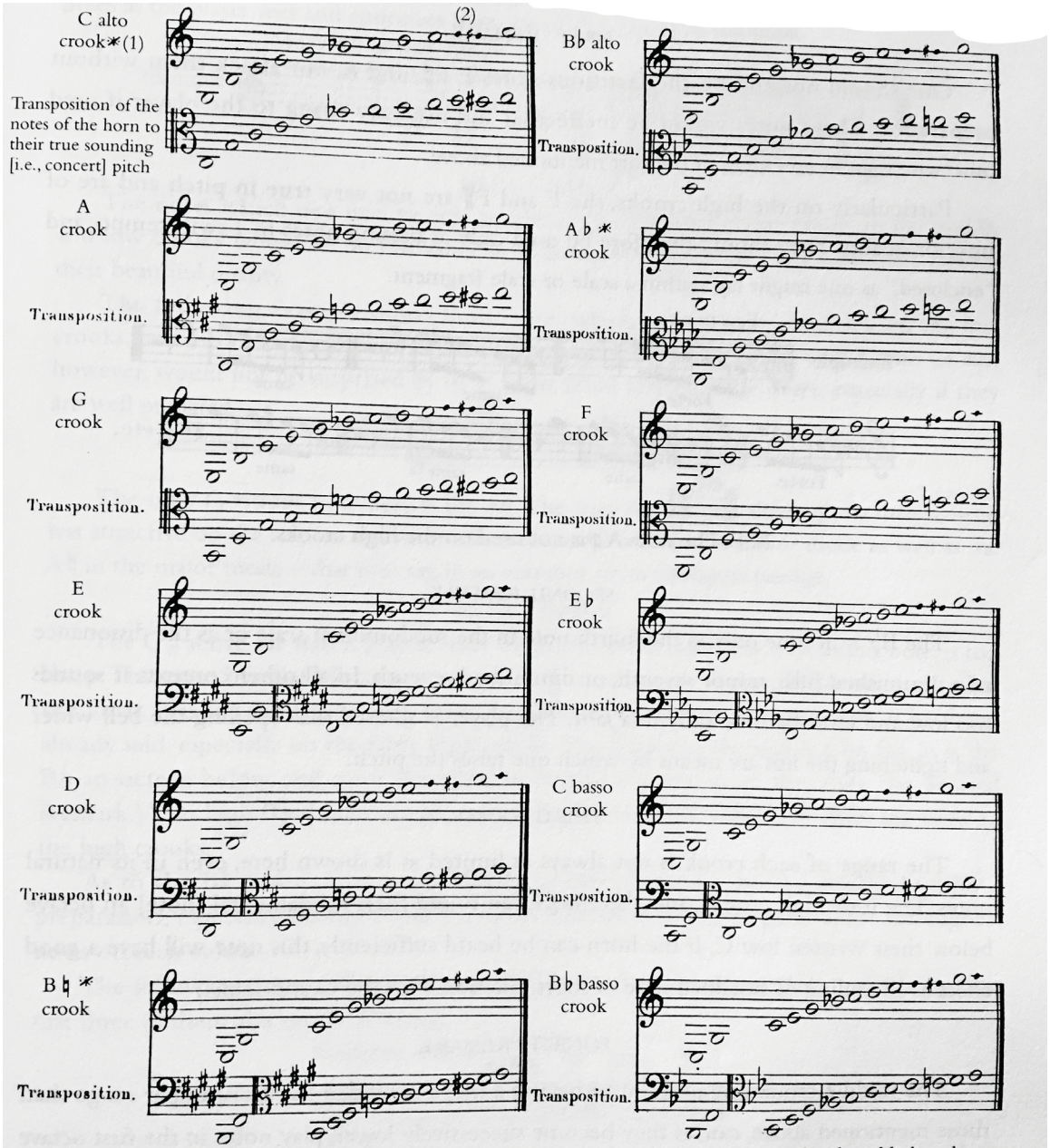
[60] Ibid., 376.

He advocates for simplicity in horn writing; to maintain writing in treble and bass clef, and without a key signature. Dauprat believed that the tasks of transposition should lie with the composer, "…who can deal with them at his leisure in his own manner, which would be much more convenient for him than for the player."[61] (Ironically, because of this manner of notation, modern students of horn are forced to transpose.) Notated in this fashion, a natural horn player would always know which were open notes and which factitious. However, the player also needed to have a "feel" for how a written c^{l} would sound with each different crook.

Dauprat provides a table of the notes recommended for use in a simple orchestral accompaniment for each crook and includes a transposition to show actual sounding pitches below each crook. (See Table 4-2.) He includes the natural harmonics and the factitious notes f^{ll}, $f^{\sharp ll}$, and a^{ll} (the small black notes), although he remarks that one should not end on these factitious notes, nor attack them without preparation.

[61] Ibid.

Table 4-2:Table of the notes of the horn used for simple accompaniment with the orchestra[62]



(1) The sign ✱ indicates crooks that are not currently used, but which are proposed to be added to those in common use now.

(2) The small black notes are factitious and are commonly used in entrances for one or two horns.

[62] Ibid., 377.

He proceeds to add more "remarks" in this chapter about additional notes and appropriate ways to use them.

Table 4-3: Dauprat's comments on how to use specific notes and crooks

Notes or crooks	Remarks
f ll, f♯ ll, a ll	Factitious notes; do not end on these or attack without preparation. (Can use as passing tones)
b♭ l	In most contexts this is too low (flat) and must only be used in a forte.
4 high crooks and G crook	These can sound the fundamental, and if texture of surrounding music is light enough, this note can be used to great effect.
Middle crooks	These can play notes in the first octave that are quite useful (A♭, G, F♯, F)
b♭ ll, b♮ll, c lll	These cost the player less effort when played on low crooks.
a ll, f♯ ll, b♭ ll	These notes out of tune on G crook (as on the high crooks) and b♭ ll should not be written for G crook.

Finally, in the end of Chapter two, Dauprat points out that rapid passages in the lower range on longer crooks are impracticable, as "…the low crooks are too heavy and their vibrations too slow…"[63]

Chapters three and four provide some more general advice for composers. Dauprat notes that the horn covers a similar range to that of the violas, cellos and basses. He says composers should make crook choices based on what key/character they require, what will pair well with other instruments scored in the piece, the fullness desired in harmonies, the range to be covered by horns and notes needed for particularly desired effects. He also makes many observations based on examples from the operas of Christoph Williabald Gluck (1714-1787), a Bohemian

[63] Ibid., 383.

turned Parisian, and favorite also of Berlioz. While he approves of Gluck's general writing for the horn, he does have a few points of contention.

> Gluck and his contemporaries did not conceive the idea of writing for two horns in different keys, even for the minor mode. But why would Gluck not have done it? In the Overture to *Alceste*, for instance, in D Minor, where the two horns in D constantly play in unison – why did the composer not feel that a horn in D and a horn in F playing together would better fill out the harmony and also at the same time increase his possibilities and multiply his effects? Did he simply not think of it? Or would the horn players of his time have been made uncomfortable in trying to hear and play on two dissimilar crooks with their two different scales and their two different timbres?
>
> In reality players who are not very experienced in accompanying within the orchestra have more difficulty in relating the [written] notes to the harmonies that they are hearing when they are playing on two different crooks, rather than on two crooks in the same key.
>
> In the latter case the two support and aid each other; in the former, they are isolated, so to speak, and each has no help from the other but must rely on himself. The differences of key, timbre, and scale between the two crooks set up a kind of incompatibility between them, which one has some trouble getting used to when first beginning to accompany in the orchestra.[64]

It is difficult to see the same notes on the page but have them sound differently each time the player changes a crook. But, as Dauprat states repeatedly, it is quite possible to overcome these difficulties and become fluent with these methods of notation and composition. Indeed, a significant part of his purpose in writing his method for composers was to encourage the use of horns in different keys played together. To begin this instruction, Dauprat spends eleven pages laying out a table showing the different combinations of crooks and how they can complement each other by combining to fill in missing natural notes in a scale. For example, two horns crooked in C and E♭ are combined for the key of C minor. Following is another set of examples, showing different combinations of two crooks, with their written pitches, and the concert pitch interval they would produce, looking specifically at intervals of a third, a fourth and a fifth apart.

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[64] Ibid., 389.

A composer could scan through these many pages, looking at crook combinations and thinking through the tonal centers in their composition, to choose the most useful and nimble permutation.

Dauprat addresses the topic of orchestral horn solos, noting that in the time of Gluck there were not many "singing passages" and rarely anything written that could be called a solo. He explains this by saying that they did not have talented players like Punto or Duvernoy available to them.[65] In truth, the state of hand horn playing in France was not yet at its peak during Gluck's time in Paris. Dauprat emphatically believes that with the newly developed hand horn skills and combinations of crooks, factitious notes can be heard more easily, and the horn as soloist or in a section will be given more melodic material. The typical crooks used for solos are the D, E♭, E, F, and G. Solos can be written for *cor alto* or *cor basse*; it depends more on the range spanned by the melody than the crook being used. No matter the crook or player, however, it is important to use the orchestral horns either not at all or very lightly as they may obscure the solo. Dauprat also warns against composing a solo for a particularly gifted player, as no matter how excellent the composition may be, it will fall out of use if it is not accessible to more than a few exceptional players.

The topic of composing for duos or other chamber compositions is well-addressed in Chapter Ten. Dauprat notes that the horn tessitura lies between violin and cello, and likewise between the clarinet and bassoon. He recommends pairing horn with other horns, or with clarinet, bassoon, viola or cello. These instruments overlap in range and somewhat in timbre. He highly recommends the chamber works of Reicha, Hummel, Mozart and Beethoven as examples of excellent writing for the horn in a small ensemble.[66] Dauprat also notes that the horn's ability to

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[65] Ibid., 416.

[66] Ibid., 419.

raise and lower its pitch at will by means of crooks makes scales easy for it which are unplayable on some fingered instruments as the key gets further away from C.

There is some math involved in Dauprat's discussion of crooks and keys and scales. For example, there are five solo crooks and six of the best scales available on each - 1st scale degree M/m, 5th scale degree M/m, and 4th scale degree M/m - for a total of twenty fairly good scales (not including repeats) available across these crooks. Factored into this equation, then, is also the character of each crook to consider. He spends a great deal of time in various tables writing out scales and available pitches based on different scale degrees. (Nothing is left to the imagination.) He aids the composer by showing the train of thought needed to think through a transposition the composer must be fluent in. "If a sharp is added to a horn crooked in D, which already has two of them, that sharp will be F for the player, but G for the composer, and the scales resulting from this additional sharp will be G Major or E Minor to the eye of the player, but A Major or F♯ Minor for the composer."[67] Dauprat ends this chapter with a horn trio by Kenn, showing the number of factitious notes that occur if all three horns are crooked in F. He then shows the same trio with horns crooked in A♭, E♭, and F, indicating the reduction in the number of factitious notes and overall better-suited musical lines.

As Part Three comes to a close, the topic of horn accompanying voice is addressed. Dauprat provides a table showing which crooks correspond in tessitura with each of the vocal ranges. He advises that it is best to use the middle crooks for this application, as low crooks are not agile and are easily covered up, while high crooks can overpower the voice and are tiring to play if a melody line is too long.

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[67] Ibid., 426.

Chapter 5: BERLIOZ'S TREATISE ON MODERN INSTRUMENTATION AND ORCHESTRATION AND DAUPRAT'S INFLUENCE

Berlioz's *Treatise* was first published as one volume in 1844. It is likely that Berlioz first conceived of the project because of his contact with Georges Kastner (1810-1867), a composer and musicologist. Kastner wrote and published his first book on the subject, *Traité general d'instrumentation*, in 1837. He followed this with *Cours d'instrumentation* in 1839. It seems that Kastner and Berlioz knew each other well (both studied composition with Reicha), and Berlioz reviewed both Kastner's books favorably in a *Journal des Débats* article on October 2, 1839. Berlioz did challenge Kastner in the review, commenting, "Instrumentation, he says, is the art of properly applying the different kinds of instruments to a given line of music. No doubt, but it is another thing: it is the art of coloring harmony and rhythm with them; moreover, it is the art of moving through the choice of timbres, regardless of any effect of melody, rhythm or harmony." In contrast to Berlioz's *Treatise* which refers chiefly to examples of composers, Kastner's *Traité general* emphasized the importance of gaining knowledge from superior practitioners of these instruments, often naming specific method books for a young composer's further reference. In his section on horn, Kastner mentions (elucidating another potential connection between Dauprat and Berlioz): "We have methods of horn by Domnich, Duvernoy, Frowhlich, Chalon, Dauprat, Meifred (method accepted by the Academy), Mendal, Iahn, Kling, Punto and others."[68]

The core of Berlioz's *Treatise* came from a series of sixteen non-technical articles published on the subject of orchestration. They appeared in the *Revue et gazette musicale*

[68] Patricia Woodward, "Jean-Georges Kastner's *Traite general d'instrumentation:* A Translation and Commentary" (Master's thesis, University of North Texas, 2003), 216.

between November 1841 and July 1842. He then continued with more articles in 1842-1843, appearing in *Journal des débats*. The latter described his observations of German orchestras, players and instruments during a trip to Germany. All these articles contributed toward the final form of his *Grand traité* which he proudly assigned opus number ten. In his introduction, Berlioz states: "The purpose of the present work is first, therefore, to show the range and certain essential details of the mechanism of each instrument, and then to examine the nature of the tone, particular character and expressive potential of each – a branch of study hitherto greatly neglected – and finally to consider the best known ways of grouping them effectively."[69] It is clear that this is a purpose previously shared by Dauprat, as he writes in his preamble to Volume Three:

> Of all orchestral instruments, the horn is the least known and the most difficult to understand. The division of its general range into two "genres" [*cor alto* and *cor basse*], their timbre and general pitch, the ways in which they can be combined in music for several horns, the different scales which can be played on each one of these crooks, the natural and factitious sounds – in a word, the use of all this instrument's resources and all the means of performance, whether in accompaniment or in solo, have always presented many difficulties for composers, who cannot be expected to have a working knowledge of all instruments…[G]reat composers sought effect rather than noise, that they made no mistake as to the means of obtaining the former while avoiding the latter, that they did not tire the performer mercilessly, and that this restraint…is precisely that which gives to each of their works a particular character, an appropriate color, a true sentiment, and a fitting expression.[70]

Berlioz is not inclined to challenge traditions of musical notation or nomenclature. If he did read and evaluate Dauprat's *Method*, he did not (nor did anyone else) incorporate Dauprat's wish to use the terms *cor alto* and *cor basse.* "There is thus a particular range for each key the instrument may be in and also two further ranges practiced by specialists who play the high part (first horn) and the low part (second horn)."[71] There is, however, no mention of the *cor mixte* that

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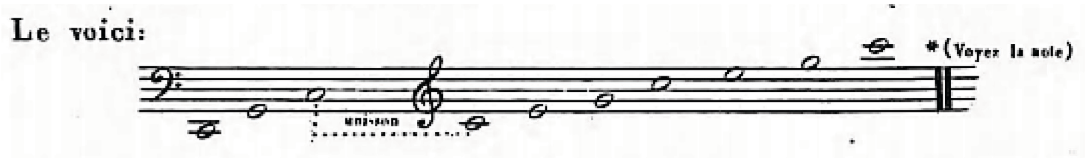
[69] Hector Berlioz, *Berlioz's Orchestration Treatise: A Translation and Commentary*, trans. and ed. Hugh Macdonald (n.p.: Cambridge University Press, 2002), 6.

[70] Dauprat*, Method*, 370.

[71] Berlioz, *Berlioz's Orchestration Treatise*, 164.

Dauprat railed against. Berlioz also maintains the practice of writing for horn in bass clef an octave lower than sounding pitch, a practice that Dauprat's predecessor Domnich attempted to eradicate. Berlioz wrote, "The horn is written on the treble and bass clefs, with the peculiarity hallowed by tradition that the bass clef is regarded as being an octave lower than it really is."[72]

Example 5-1: Explanation of bass clef notation from Dauprat's *Method*[73]



Example 5-1, taken from Dauprat's method book, Volume One, includes reference to a note attempting to explain this practice. In it Dauprat says that the C alto crook is the only one that does not transpose, but that as one works down the list of crooks, the C basso crook transposes down a full octave, and so the displacement of bass clef down one octave makes sense. It seems a stretch to try and validate the octave displacement, but in the end Dauprat simply says, "they [composers] have held to the manner of writing horn parts indicated in the above example."[74]

Berlioz provides a table with separate charts for each crook, showing available open notes, including sounding pitch, with first and second horn ranges superimposed. (See Table 5-1.) This table appears very similar in format and somewhat in content to Dauprat's table of open notes of the horn used for simple accompaniment, appearing early in Volume Three (see Table 4-3). In Dauprat's table, he is representing only notes for simple accompaniment, while Berlioz is listing the full spectrum of open notes available to composers.

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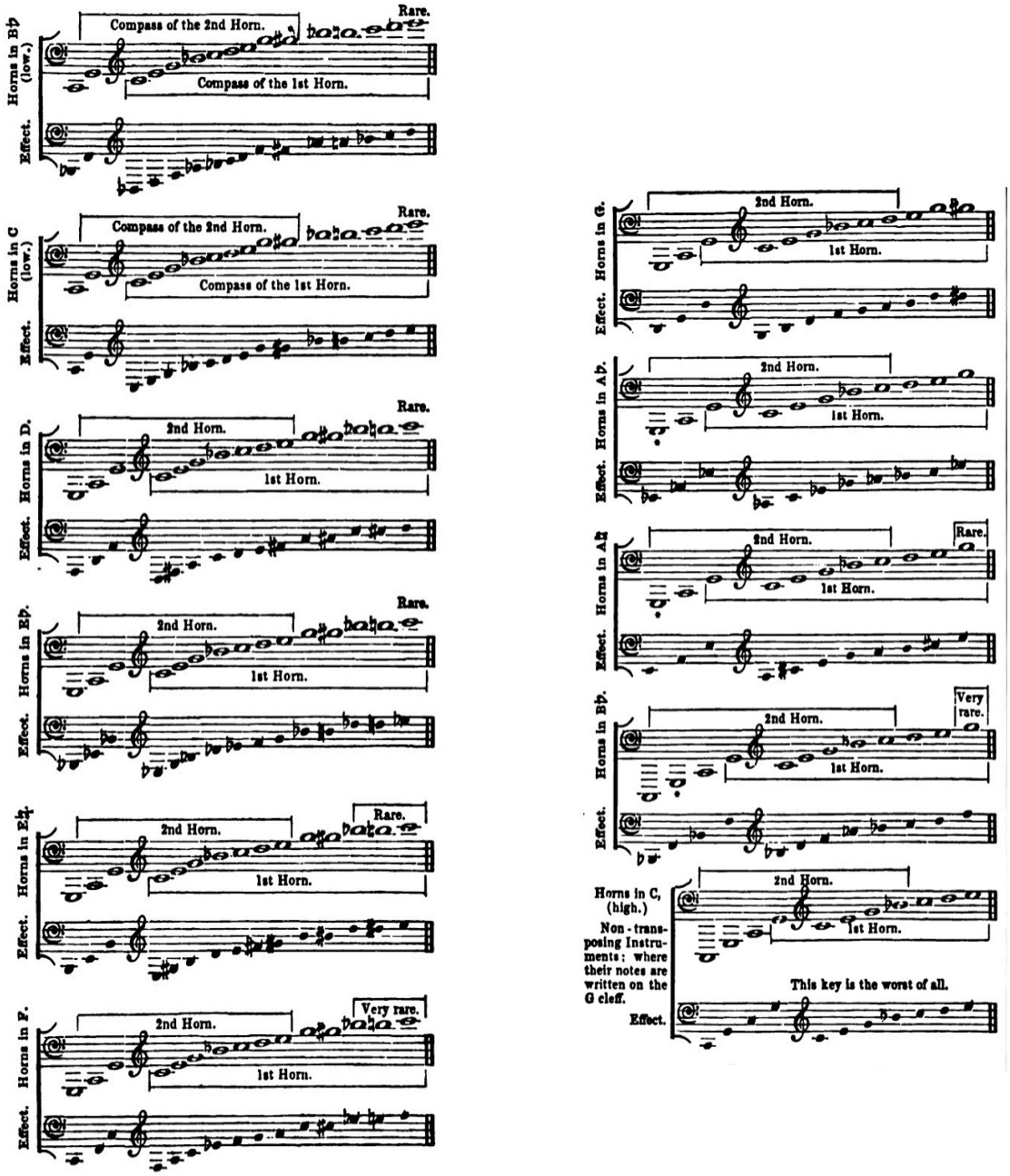
[72] Ibid.

[73] [73] Louis François Dauprat, *Méthode de Cor-Alto et Cor-Basse* (Paris: Zetter, 1824?), p. 22.

[74] Dauprat, *Method*, 30.

Table 5-1: Open notes available on each crook, Berlioz *Treatise*[75]



[75] Hector Berlioz, *A Treatise Upon Modern Instrumentation and Orchestration*, trans. Mary Cowden Clarke (London: Novello, Ewer and Co., 1858), 171-172. This is the first edition in English, and otherwise appears in the same format as the original. Used to show similarities with Dauprat's format and information.

The ranges of first and second horn are similar to those given by Dauprat in his Grand Table found at the end of Volume Three, although Berlioz is more kind to the second horn, restricting the upper range to an interval of often a third or fourth lower than does Dauprat. Dauprat says "The range of the *cor basse* covers two octaves and a fifth, sometimes a sixth, and even three octaves, depending on the crook."[76] However, the Grand Table often shows a bit bigger range than this for the *cor basse*. Berlioz lists eleven crooks, missing only the B♮ basso crook from Dauprat's table (although later on he suggests adding it); B♮ basso is one of three crooks Dauprat marks as not being currently used (along with C alto and A♭). Immediately following Berlioz's table, he talks about enlarging the number of crooks.

> The family of horns is complete; it is found in every key, contrary to common belief. Keys of the chromatic scale which seem to be missing can be obtained by means of a shank which lowers the instrument by a semitone. Thus we have a basic series of horns in low B♭, C, D, E♭, E♮[77], F, G, A♭, high A, high B♭, and high C. But by adding an extension in the keys of low B♭ and low C you can get low A and low B and by the same means turn D into D♭ (or C♯), G into G♭ (or F♯) and high C into high B (or C♭). One can get this last key by simply pulling out the tuning-slide of the horn in high C.[78]

Dauprat and Berlioz agreed that the number of crooks should be increased. Twenty years previously, Dauprat mentions only nine commonly used crooks but suggests the addition of three more; by 1844 Berlioz mentions eleven common crooks, with the expectation of adding five more. In the span of his compositions, Berlioz used horns crooked in thirteen keys, excepting only high B♭, high B, and high C.[79]

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[76] Dauprat, *Method*, 421.

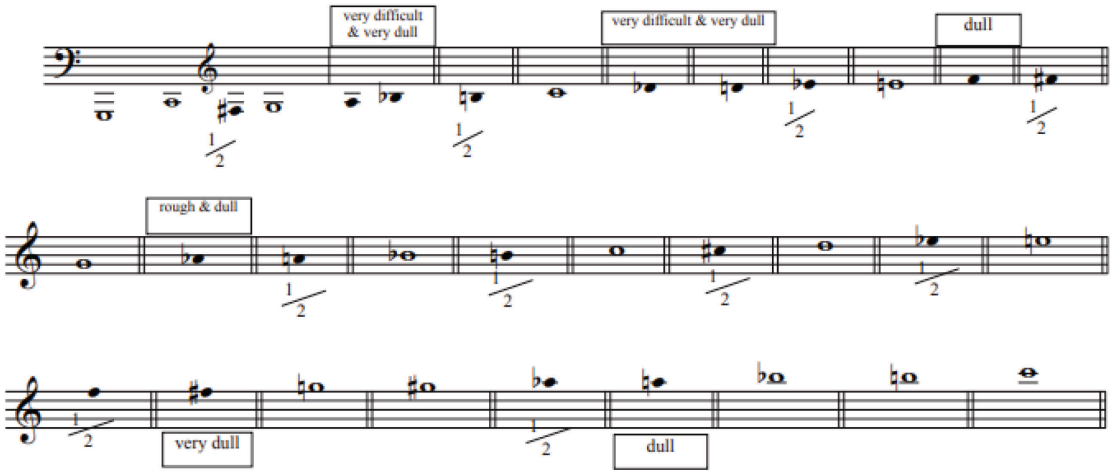
[77] Macdonald mistakenly leaves out the E♮ crook from this translation; it appears in Berlioz's original text, and in the translation by Mary Cowden Clarke in 1856.

[78] Berlioz, *Berlioz's Orchestration Treatise,* 166.

[79] Ibid.

After talking about the open harmonic series that is available (mentioning that the g$^{\sharp II}$ is a bit sharp and better approached as an upper or lower neighbor), Berlioz then provides a chart of the stopped notes (known as factitious notes by Dauprat) with indications about clarity of sound for various pitches. The best stopped notes are marked with " ½", indicating a clearer sound because a less than full stopping of the bell is required to sound the notes in tune.

Table 5-2: Stopped notes, Berlioz's *Treatise*[80]

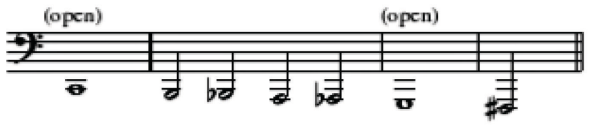


Berlioz's opinion about the quality of each note in Table 5-2 matches fairly closely with Dauprat's opinions expressed in his Grand Table at the end of Volume Three. Dauprat, however, saw these notes as needing at least three different approaches in many cases, as the clarity of sound and hand position in the bell differed between the three classes of crooks (high, middle and low.) Berlioz's single table simply can't reflect the complexity of Dauprat's Grand Table, which provides a much more nuanced look at each crook. But it does serve the function of communicating which notes are less useful without overwhelming the reader with too much information.

[80] Hector Berlioz, *Grand Traité d'Instrumentation et d'Orchestration Modernes* (Paris: Schonenberger, 1844), 173.

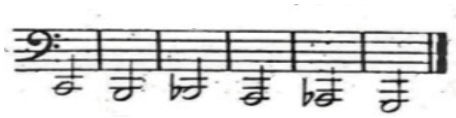
In a final section on available notes, Berlioz covers some less well known but useful open notes. He mentions g♭ II which should only be approached as an upper neighbor to f II, and the notes a♭ and f, both playable by adjusting upward or downward, respectively, from g. Berlioz states, "Some can also play the five additional notes B I, B♭ I, A I, A♭ I, and F♯ I, which are very rarely in tune, very hard to pitch and should in any case only be tried on horns of the middle range such as horns in D, E and F, and only in a descending progression..."[81]

Example 5-2: Berlioz's example of descending progression[82]



Dauprat also addresses these notes directly-but omitting the F♯ I (although it does appear in the Grand Table). "These notes must be used only in slow tempi in order to give the player time to place each one, and [only] on the F, E♭, and E crooks."[83]

Example 5-3: Dauprat's treatment of descending pedal notes[84]



[81] Berlioz, *Berlioz's Orchestration Treatise,* 167.

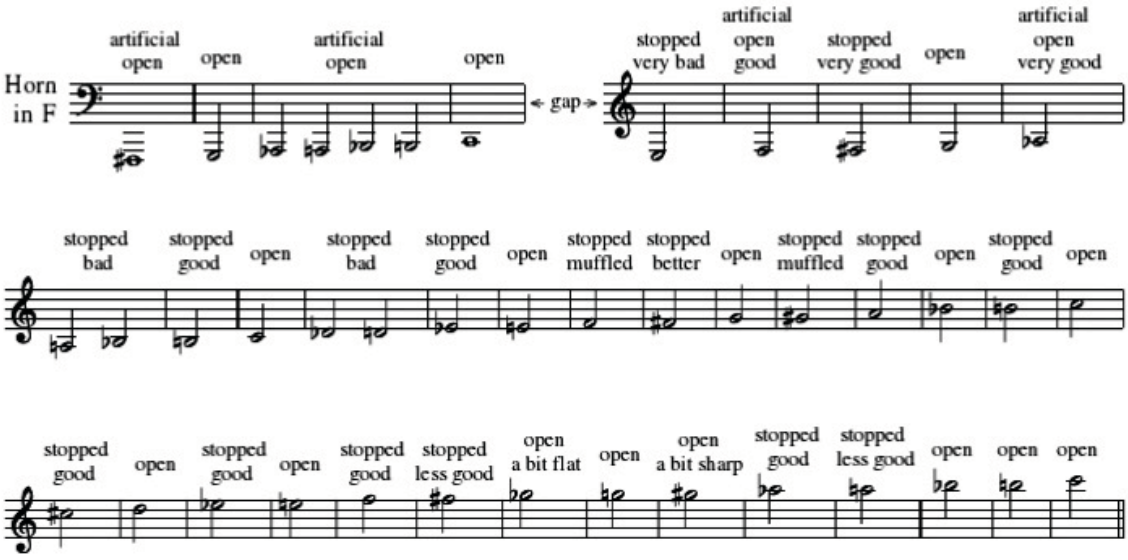
[82] Ibid.

[83] Dauprat, *Method*, 384.

[84] Ibid. There is a similar representation on page 23, contained in a discussion of mouthpiece placement and these pedal notes.

Finally, Berlioz combines all the possible notes he has mentioned previously: open notes, artificial open notes (requiring bending of the pitch with the embouchure), and all notes stopped to any degree. The result is "the horn's immense chromatic range from bottom to top."[85]

Table 5-3: Berlioz's combined horn chromatic range[86]



The gap Berlioz shows is not quite as wide in Dauprat's Grand Table. He includes an open D♭, including the note, "The D♭ and A♭ in the bass clef are played with the bell wide open on all crooks."[87]

Now that Berlioz has established the available notes (and their relative quality) for the horn, he begins to talk about what is involved in writing appropriately for horn. He mentions that "…rapid passages are harder the lower-pitched the horn, its tube being then of great length and unable therefore to be set in vibration instantaneously."[88] Dauprat mentions this same issue,

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[85] Berlioz, *Berlioz's Orchestration Treatise*, 168.

[86] Ibid.

[87] Dauprat, *Method*, 464.

[88] Berlioz, *Berlioz's Orchestration Treatise*, 168.

saying of a quick-moving eighth-note passage, "The low crooks are too heavy and their vibrations too slow for these sorts of passages."[89] Berlioz continues, stating the best stopped notes generally occur above $a^{\flat 1}$. He discusses the fact that most earlier composers (Beethoven included) have written quite conservatively for horn, keeping mostly to the use of open notes, except for particular effects.[90] Dauprat says "the horns are almost always limited to a few notes in the tuttis – natural notes that never comprise intervals other than the third, fifth, sixth, and octave – or tiny, often incomplete phrases."[91] Berlioz follows up, complaining that current composers pay no attention to how to write for horn and simply compose parts with no concern for difficulties in approaching stopped notes or awkward intonation, etc. "Even the poverty of early music is preferable to this ignorant and wasteful nonsense."[92]

Dauprat approaches trills on the horn in Chapter Seventeen of the first volume of his *Method*, saying they take a long time to perfect, and so should be started early in the hornist's studies. "Not all of the horn's notes are equally suitable for successful trilling, even those in the third octave of the overall compass of the instrument – the only ones on which trills can be done successfully."[93] Berlioz agrees with this, stating that trills are only possible in a small part of its range, listing a^{l}, $b^{\flat l}$, b^{l}, c^{ll},d^{ll}, and e^{ll}. [94] He very rarely writes horn trills in his compositions.

Berlioz discusses how to choose which key to crook the horn in for a solo or concertante part. He gives an example with the orchestra in $E^{\flat}$ showing how it is just as advantageous (or

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[89] Dauprat, *Method*, 383.

[90] Berlioz, *Berlioz's Orchestration Treatise*, 169.

[91] Dauprat, *Method*, 416.

[92] Berlioz, *Berlioz's Orchestration Treatise*, 170.

[93] Dauprat, *Method*, 50.

[94] Berlioz, *Berlioz's Orchestration Treatise*, 173.

more so) to crook the horn in F with a key signature of B♭ instead of horn in E♭, so that certain notes are open and singing (the fourth and sixth scale degrees).[95] Dauprat shows a similar situation, in the context of a horn trio in A♭. He shows that instead of keeping all three horns in F (with a key signature of E♭), if the first horn is crooked in A♭ alto with a key signature in C major, the second horn in E♭ with a key signature of F, and the third horn remains in F, the new arrangement limits the number of factitious notes and enhances the timbres present.[96] As Berlioz continues to consider how to choose the key of the horn, he expands to discuss common practice in the orchestral section, which then usually included four horns instead of the earlier compliment of two. Berlioz comments:

> The composer who puts all four horns in the same key nearly always reveals his remarkable clumsiness. It is incomparably better to have two horns in one key and two in another, or better still the first and second in one key, the third in another and the fourth in another; or finally four horns in four different keys, which should be done particularly when a great number of open notes is required.[97]

Dauprat also comments on this seemingly incomprehensible practice of crooking the orchestral horns all in the same key. "Gluck and his contemporaries did not conceive the idea of writing for two horns in different keys … Did he [Gluck] simply not think of it?"[98] Berlioz goes on to give several examples:

> If the orchestra is playing in A♭ for example, the four horns could be in A♭, E (whose E produces G♯, enharmonically the same as A♭), F and C; or alternatively A♭, D♭, E and low B (whose E produces D♯, enharmonically the same as E♭). Depending on the nature of the piece one might choose the four keys in several other ways; the composer has to work out his harmonic needs and

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[95] Ibid.

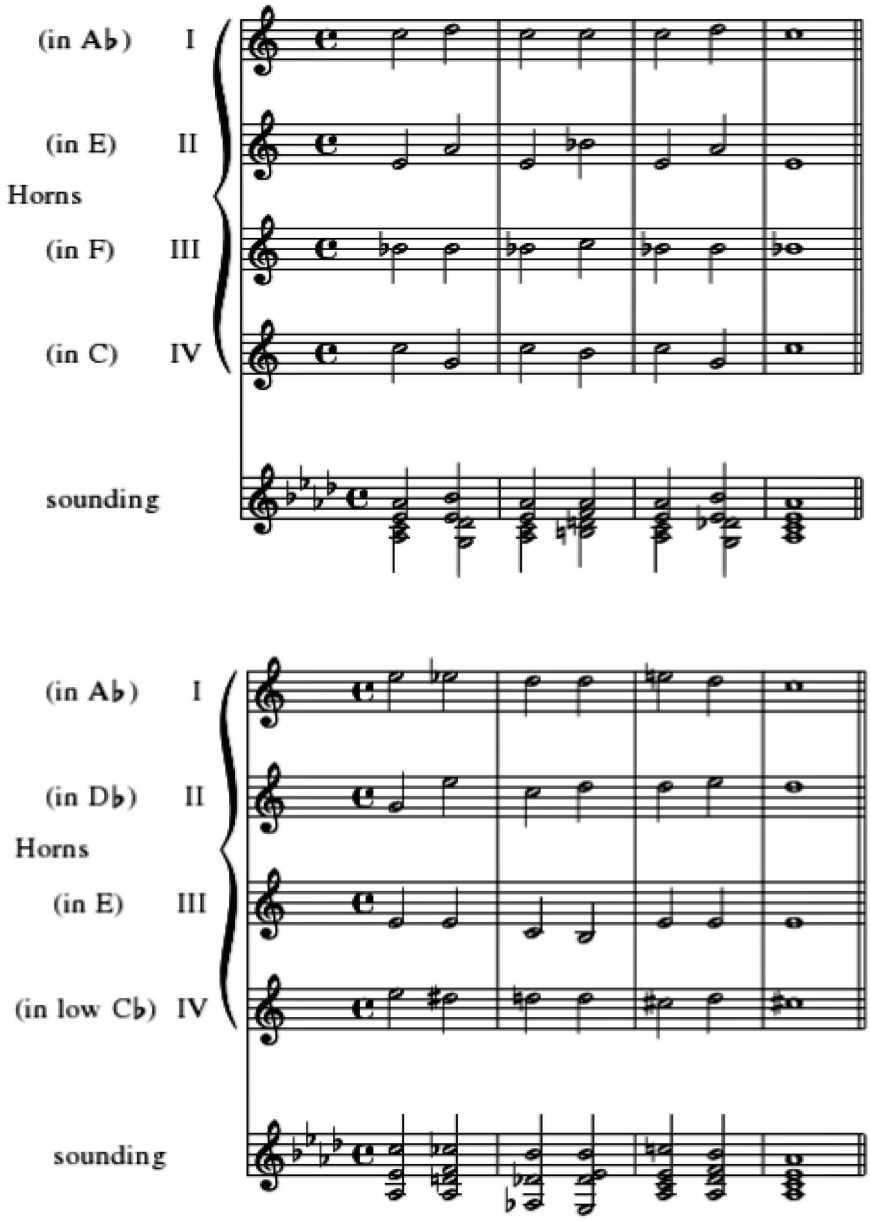
[96] Dauprat, *Method*, 432-35.

[97] Berlioz, *Berlioz's Orchestration Treatise*, 174.

[98] Dauprat, *Method*, 389.

devise the choice of horns accordingly. In this way there are very few chords which cannot be obtained with four, three, or at least two open notes.[99]

Example 5-4: Berlioz's example of horn key choice[100]



[99] Berlioz, *Berlioz's Orchestration Treatise*, 174.

[100] Ibid.

It seems that Berlioz was more concerned with obtaining the open sound of the horn than with the timbral qualities of the different crooks. He said, "the composer has to work out his harmonic needs and devise the choice of horns accordingly."[101] Within his volume for composers, Dauprat focused more on helping the reader understand how to make choices that would produce good open notes rather than a choice giving more weight to the timbre each crook represented. Even so, he does spend some time promoting the timbres and color choices available to the composer:

> Two horns crooked in two different keys, and thus having two differing timbres, also have two distinctive characters. One can, likewise, obtain three timbres, or particular characters, with three horns, of which one has a low crook, the second a middle crook, and the third a high crook…These timbres, these various characters, form the colors and shadows, the nuances and contrasts in music, which skillful composers are able to put to such varied uses. Besides, to know how to vary the timbres, not only of the horn but of the other instruments, according to the emotions that must be evoked, the feelings that must be engendered, the effects that one wants to produce, is not so much the labor of talent than that of spirit and genius.[102]

Berlioz also discusses making choices of horn keys based on the differently crooked horns sharing a melody. Either each horn taking a portion of the melody in an open section of their range, combining to make one whole melody, or all horns playing a single melody together, so that when one horn is on a weaker (stopped) note, one or more of the other horns will be on a strong open note, thus combining to make a strong whole.

In the final section on the natural horn, Berlioz covers some effects the horn can produce. *Cuivrer les sons* means to make a brassy sound. This sound can be produced on either a stopped or open note by forcing air through the bore of the horn to produce a cutting edge on the tone. To add even more to the coarseness of the sound, an indication might be made for *pavillons en l'air*, asking for the bells to be raised in the air (disallowing a hand in the bell). Dauprat does not

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[101] Ibid.

[102] Dauprat, *Method*, 373.

discuss these effects. Berlioz does not mention horn mutes, although he does occasionally use them in his compositions. Dauprat mentions the use of mutes, saying: "Since the better artists have succeeded in altering the notes of the horn with the hand, the lips, and the breath more or less at will, they no longer make use of the mute, much to their credit."[103]

Following the chapter on natural horn, Berlioz includes approximately one page on "the piston or cylinder horn." He says,

> Many composers object to this new instrument because, since it began to appear in orchestras, certain horn players use pistons to play parts written for the ordinary horn; they find it more convenient to use the mechanism to play as open notes those notes which the composer *intended* to be played stopped. This is in fact a dangerous misuse and it is up to conductors to stop it spreading. One should not forget, after all, that in the hands of an able player the piston horn can produce all the stopped notes available on the ordinary horn *and more besides*, since it can play a complete scale without a single open note.[104]

Berlioz would later talk with the horn maker Raoux, and then with the inventor and horn maker Adolphe Sax, changing his mind and lending his support to these new developments. He would later compose separate parts for natural and valved horns and indicate where he intended for notes to be stopped.

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[103] Dauprat, *Method*, 355.

[104] Berlioz, *Berlioz's Orchestration Treatise*, 181.

Chapter 6: *ROMEO ET JULIETTE*: BERLIOZ'S HORN WRITING

It was during Berlioz's student days in Paris that he first became acquainted with Shakespeare, and specifically with *Romeo and Juliet*. In his *Memoirs*, he vividly recounts his first exposure to the play and to his future wife, actress Harriet Smithson:

> As I came out of *Hamlet*, shaken to the depths by the experience, I vowed not to expose myself a second time to the flame of Shakespeare's genius. Next day the playbills announced *Romeo and Juliet*… After the melancholy of *Hamlet*, after the agonizing sorrows, the love 'all tears', the cruel ironies and black meditations, the heartbreak, the madness, the weeping, the bereavements, the disasters and fatal accidents, after Denmark's somber clouds and icy winds, to be exposed to the fiery sun and balmy nights of Italy, to witness the drama of that passion swift as thought, burning as lava, radiantly pure as an angel's glance, imperious, irresistible, the raging vendettas, the desperate kisses, the frantic strife of love and death, was more than I could bear. By the third act, scarcely able to breathe – it was as though an iron hand had gripped me by the heart – I knew that I was lost… [T]he power of acting, especially that of Juliet herself, the rapid flow of the scenes, the play of expression and voice and gesture, told me more and gave me a far richer awareness of the ideas and passions of the original than the words of my pale and garbled translation could do. An English critic stated in the *Illustrated London News* last winter [February 12, 1848] that after seeing Miss Smithson as Juliet I exclaimed, 'I shall marry that woman and write my biggest symphony on the play.' I did both, but I never said anything of the sort.[105]

The date was 1827, and Berlioz was in his second year as a full-time student at the Conservatoire. The idea for the "dramatic symphony" surely incubated over the next twelve years, with a mention of the project occurring here and there. Emile Deschamps claimed that Berlioz talked to him about developing a libretto for *Roméo et Juliette* in 1829.[106] Again, in his *Memoirs,* Berlioz recounts a story from his time in Italy after winning the *Prix de Rome*: "It was on a riding excursion in the Roman Campagna with Felix Mendelssohn that I mentioned my surprise that no one had ever thought of writing a scherzo on Shakespeare's glittering little poem, 'Queen Mab'. He was equally surprised, and I instantly regretted having put the idea into his head."[107] But

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[105]Berlioz, *Memoirs*, 72-73.

[106]Julian Rushton, *Berlioz: Roméo et Juliette* (Cambridge: Cambridge University Press, 1994), 9.

[107]Berlioz, *Memoirs*, 150.

Mendelssohn did not seize on the idea Berlioz mentioned in 1832, and Berlioz was eventually able to write his own Queen Mab scherzo as he composed *Roméo et Juliette* in 1839. However, the work was not yet in final form. It passed through three performances in November and December of 1839 (no complete copy exists of that first version), a first edition in 1847 and eventually a final form in the second edition was published in 1857. Very few changes were made between the 1847 and 1857 editions,[108] and the changes that were made did not affect the horn writing.[109]

The horn writing in *Roméo et Juliette* is a good window into Berlioz's compositional practice regarding orchestral horn parts. It is of particular interest in this study because of the timing of composition. Written in 1839, it embodies the knowledge and experience Berlioz had so far accumulated as he began to write about the subject of orchestration. Two years after the premier of *Roméo et Juliette*, Berlioz reviewed Kastner's books on instrumentation and orchestration and began writing his articles on orchestration, with his *Treatise* following soon after. In fact, he sent an autographed score of *Roméo et Juliette* to Georges Kastner in 1858.[110]

Berlioz wrote for the horn in *Roméo et Juliette* in much the same way he recommended within the horn chapter in his treatise. By looking at how he used stopped notes (partially and fully stopped), wrote for four horns as a unit, dealt with solo writing within the dramatic symphony, and how he combined horns in different keys, a picture begins to form of Berlioz's thoughts on the capabilities of the horn.

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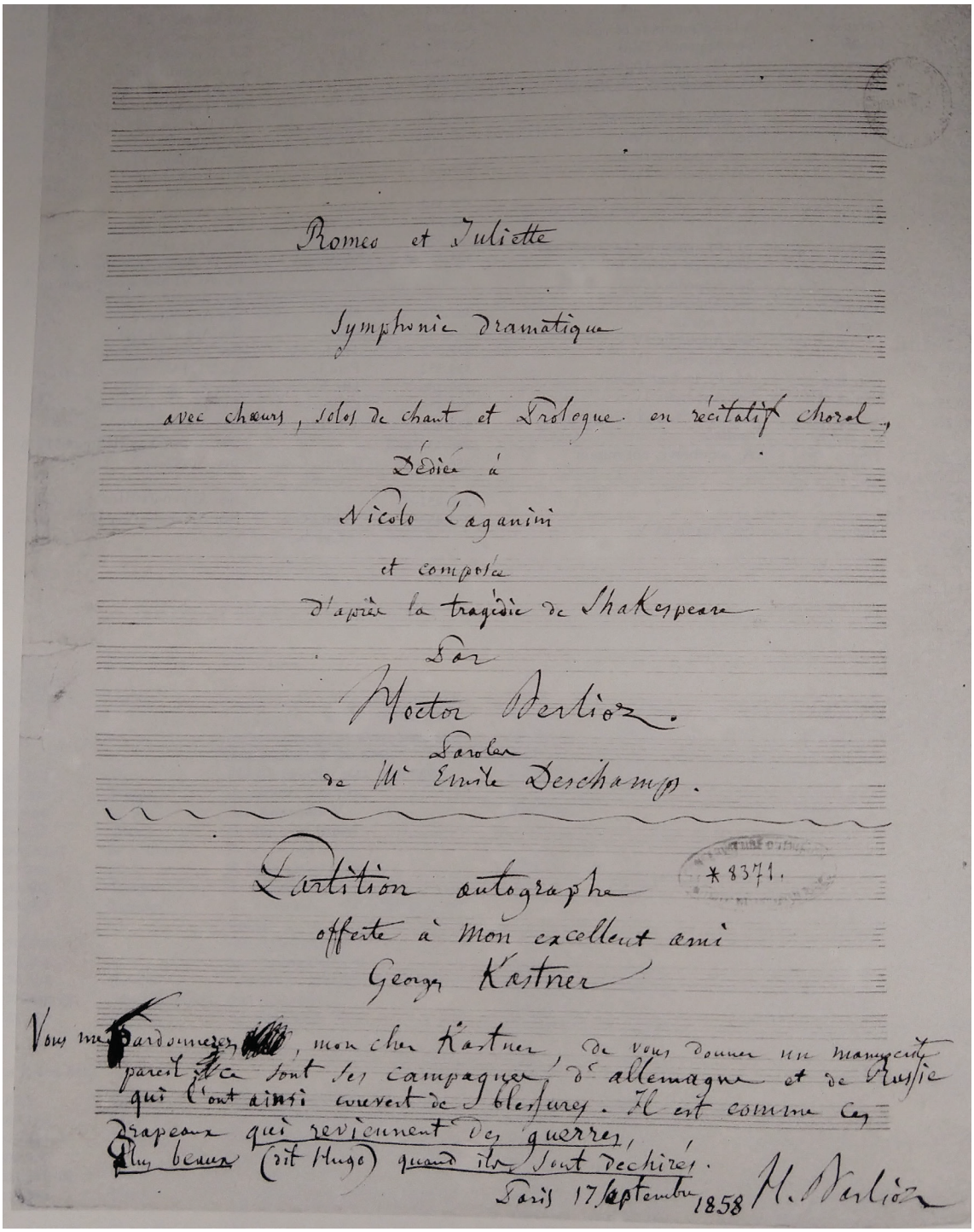
[108] Rushton, *Berlioz: Roméo et Juliette*, 13.

[109] I will use the 1857 edition orchestral score as reference for examining the horn writing in Berlioz's *Roméo et Juliette*.

[110] Addressed to Kastner, it reads "You will forgive, my dear Kastner, my giving you such a manuscript: the German and Russian campaigns have so covered it with wounds. It is like those flags 'that come back from the wars more beautiful,' says Hugo, 'when they are torn.' Paris, 17 September 1858"

Figure 6-1: Autographed score of Berlioz's *Roméo et Juliette*, addressed to Georges Kastner[111]



[111] D. Kern Holoman, ed., *New Berlioz Edition Volume 18, Roméo et Juliette* (Kassel: Bärenreiter, 1990), 374.

In *Roméo et Juliette,* Berlioz uses stopped notes which he considers in his *Treatise* to be undesirable twelve times. He comments, "The notes a, b♭, d♭1 and d1 are very difficult and muffled; f1 is muffled; a♭1 is pinched and muffled; f♯1 is very muffled; aII is muffled."[112] The twelve instances that occur in the symphony are multiples of the three notes f1, d♭1, and a♭1. In every instance, Berlioz pairs the muffled stopped note with the same note (not always in the same octave) in another instrument. In the majority of examples, the horn is paired with viola or cello, trombone or ophicleide, or clarinet, bassoon, and sometimes English horn. For reasons of range and shared timbre, Dauprat recommends most of these pairings in his *Method* while talking about chamber music.

> In the duo, the horn can be paired with a clarinet or bassoon, but not with a flute or oboe unless there is a low instrument also to accompany the horn when it has the melody, because these two instruments do not have enough low notes to do so. The same applies to the violin, although it descends a fourth below the oboe, because of the poor match of its timbre with that of the horn. The viola and cello combine better with the horn, because the timbre, range, and pitch of these three instruments are nearly the same.[113]

Berlioz also uses some of the open notes below c1 that require some embouchure manipulation to bend the notes into place. From his *Treatise*, "a♭, [is] obtained by pinching the lips and forcing up the g, and f, obtained in the opposite way by relaxing the lips…If necessary these low notes can be played without any preparation, so long as they are not preceded by too high a note. It is normally much better to let them follow a g."[114] The following example from *Roméo et Juliette* demonstrates exactly this approach.

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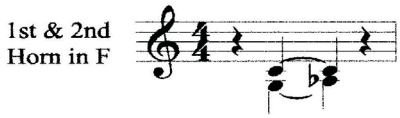
[112] Berlioz, *Berlioz's Orchestration Treatise*, 167.

[113] Dauprat, *Method,* 420.

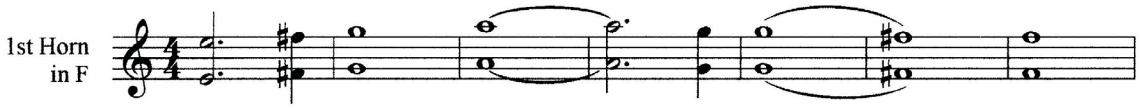
[114]Berlioz, *Berlioz's Orchestration Treatise*, 167.

Example 6-1: *Roméo et Juliette*, Part Two, m. 61



Berlioz also compensates for what he considers "good" stopped notes by pairing with another horn with the same note on a more open harmonic, or again with other instructions in the orchestra. He does not trust fully stopped horn pitches to project well, and frequently makes sure that he is not relying only on fully stopped horn notes for pitches which must be apparent to the listener. This example demonstrates this technique. The $f^{\#I}$ in the second horn projects well

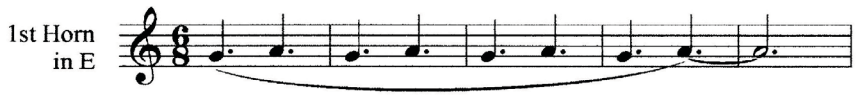
Example 6-2: *Roméo et Juliette*, Part Two, m. 246-252



and helps reinforce the $f^{\#II}$ in the first horn, which projects less well. Then while the second horn is playing an a^{I} which is a good stopped note, the first horn is playing a less secure and more fully stopped a^{II}. The final note in this example shows the second horn playing an f^{I} (a fully stopped note) while the first horn projects well the f^{II} (a partially stopped note) one octave above.

An example of the only thing resembling a horn solo in the whole of *Roméo et Juliette* is found over a span of five measures in the opening Allegretto of the Third Part. It is not melodic material, but simply a rocking back and forth between g^{I} and a^{I} (sounding b and $c^{\#I}$.)

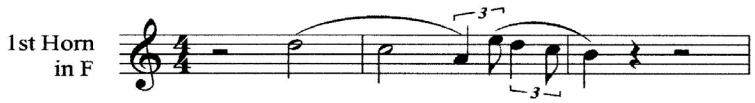
Example 6-3: *Roméo et Juliette*, Part Three, m. 35-39



The only other sounds occurring during this "solo" are two measures of a chord in the strings, and then a further thinning out as only the violins play a unison e^{II}. The harmonic tempo is slow up to this point, and the overall dynamic is *pp*, making the horn easily heard, even though the a^{I} is partially stopped.

Another example of a very small soloistic part is a few bars in Part Two, when the first horn in F joins with other woodwinds to fill in the harmony that accompanies the solo in the first flute.

Example 6-4: *Roméo et Juliette*, Part Two, m. 47-49



In Macdonald's commentary, he mentions Berlioz's lack of solo writing for horn, saying: "although he describes the instrument as noble and melancholy, there are few extended solos in his music to support that characterization. It [horn] has some melodies…where it is always in unison with woodwinds or strings."[115]

Macdonald goes on to say, "Berlioz's conception of the horn section as a multiple unit contributing to a collective effect is a fine illustration of his modern approach to orchestration wherein the composer's concern is for aural effect, not for the player's sense of playing a part."[116] There are two ideas to address in this statement. The first thing to notice in Macdonald's comment is that he says this manner of composition shows Berlioz's "modern approach" to orchestration. While it may have been modern in the sense that not many other composers were utilizing this manner of horn writing, it was an old idea strongly advocated fifteen years earlier in Dauprat's *Method* and in his trios, quartets and sextets for horns in different keys. The second

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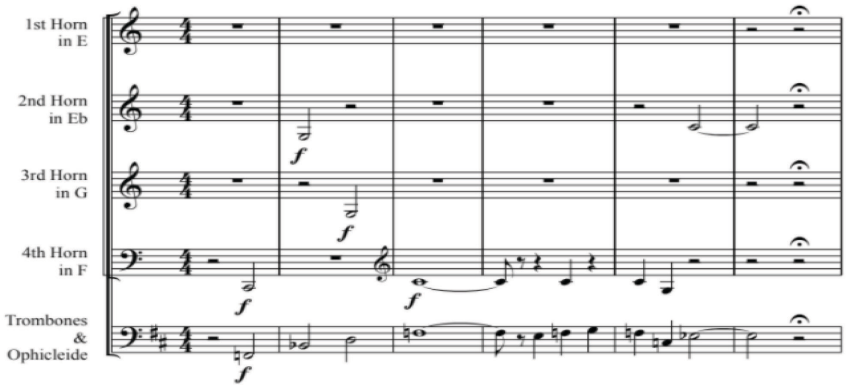
[115]Berlioz, *Berlioz's Orchestration Treatise*, 180.

[116] Ibid.

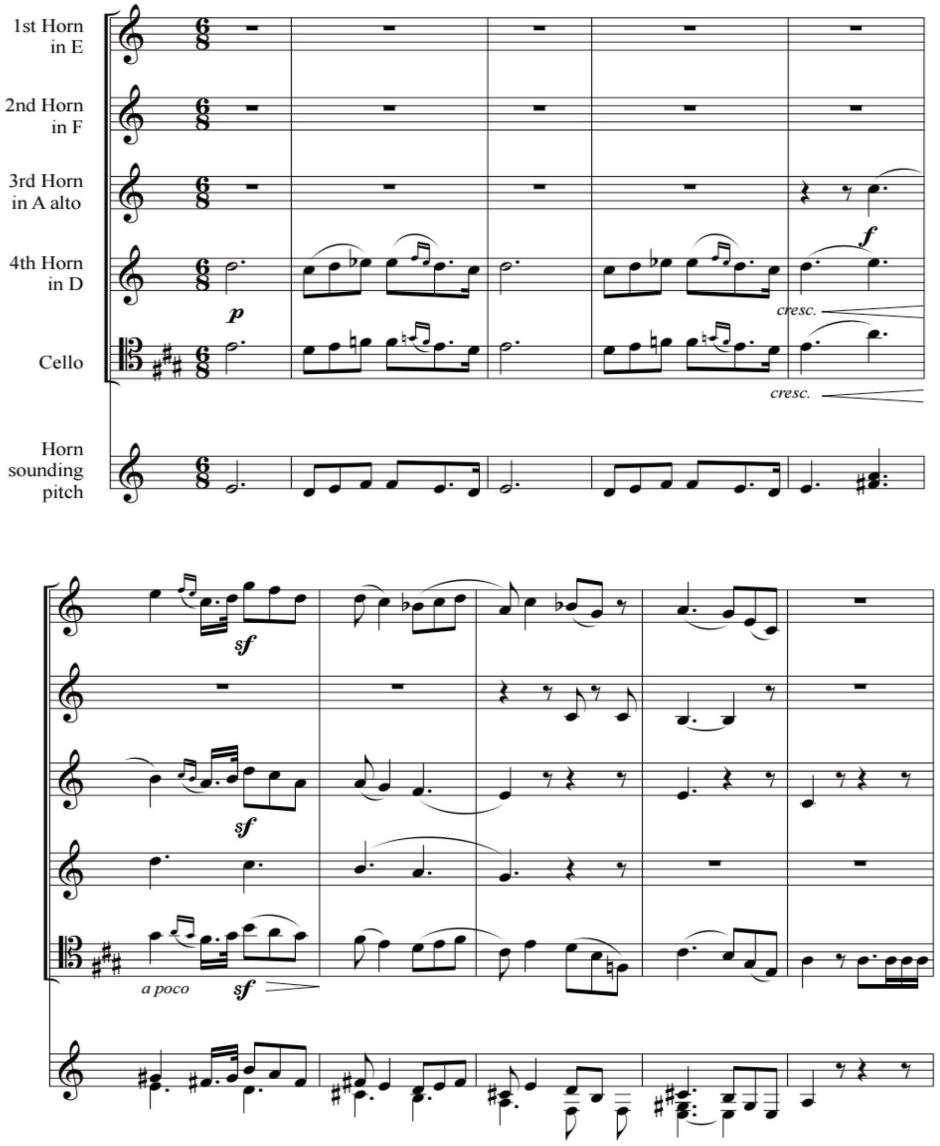
concept to consider from Macdonald's statement is that of Berlioz's concern for overall effect, rather than a consideration of the player's sense of participation. Berlioz is unconcerned about how playing only a few notes of a given melody feels to a player, focusing only on the sound of three or four players combining notes to create a whole soloistic line. There are numerous examples of this kind of writing in *Roméo et Juliette*.

Example 6-5: *Roméo et Juliett**e***, Part One, m.78-83



It is easy to see how Berlioz uses the horns as a unit here, even in this simple example. The full musical line occurs in unison in the Trombone and Ophicleide parts, reinforced with strong open unison notes from whichever horn can fill in for each note in the line. This technique happens numerous times in *Roméo et Juliette*. In Part Three, during the *Scene d'amour*, Berlioz involves all four horns in a melody line. It is, again, not independent, but coloring a cello line. It works beautifully, but Dauprat might have argued that a horn or two could have played this melody without another instrument doubling as long as the orchestral texture stayed at a low volume.

Example 6-6: *Roméo et Juliette*, Part Three, m. 146-155



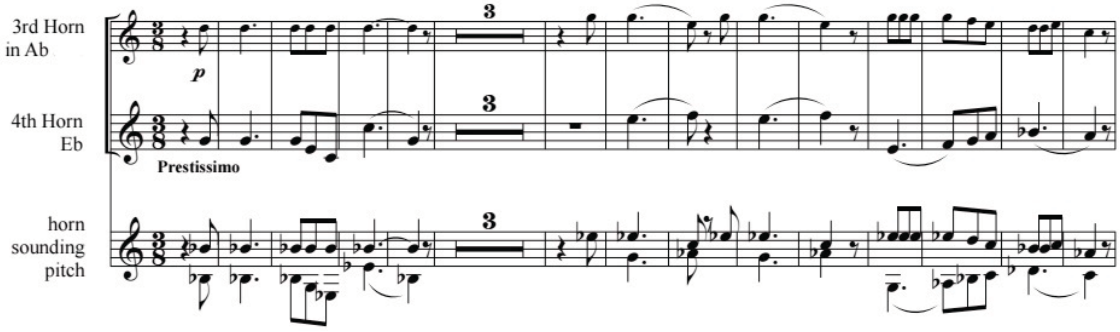
The final example of this type occurs in Part Four, during *La reine Mab* scherzo. The episode begins at measure 475 and continues intermittently until measure 609. Berlioz uses all four horns in various combinations throughout. The sound he creates is reminiscent of horses and the hunt. In his *Treatise*, Berlioz remarks:

> I said just now that the horn is a noble, melancholy instrument despite the jolly hunting fanfares so often associated with it. In fact the jollity of these tunes arises more from the melody itself than from the horn's tone quality. Hunting calls are

> only jolly when played on a proper hunting-horn, a rather unmusical instrument whose strident blast bears little resemblance to the horn's chaste and shy voice.[117]

Dauprat also remarks on this, saying "Nowadays, horns are being included in fanfares, which would seem to be the exclusive province of trumpets and timpani."[118] He argues that horns can hardly be heard in this kind of texture, and also mentions that since horns do not double-tongue, they often can't keep up in a fast tempo. Berlioz does keep the texture rather thin, using only strings (for the most part) while the horns are playing the melody. And this time, they are not in unison with another instrument, but carry the melody independently, within the horn section.

Example 6-7: *Roméo et Juliette*, Part Four, *La reine Mab*, Scherzo, m. 523-539



This is only a short example from the Scherzo; there are many more sections in *La reine Mab* involving the different horns at various times.

[117]Berlioz, *Berlioz's Orchestration Treatise*, 179.

[118] Dauprat, *Method*, 420.

Table 6-1: Tonal outline of *Roméo et Juliette*[119] with corresponding horn keys added

Part	Sections	Tonal outline	Horn keys
No. 1	Introduction: combats Intervention Prologue Ball music Romeo sighs Love music Strophes Scherzetto Tragic foreboding	B minor Various: ends V/b From V/b: various A-F D E G F A minor	E, E♭, G, F
No. 2	*Roméo seul: Tristesse:* *Grande fête chez Capulet*	F major	F, F, D, C
No. 3	*Scène d'amour*	A	E, F, A♮alto, D
No. 4	Scherzo	F	F, C, A♭, E♭
No. 5	*Convoi funèbre*	E minor	No Horns
No. 6	*Romèo au tombeau* Reunion and death of the lovers	E minor, C♯ minor A major	E, A♭, D, D♭ E, A♮, D, F
No. 7	Families enter Lawrence's narration Aria (Larghetto) Strife resumes Lawrence's response Oath of reconciliation	A minor C minor E flat major (Allegro) B major B minor (to V/D) D/B minor: B major B major	F, D, A♮alto, C E, E♭, G, F D, D, G, F D, D, E, F

A final way of understanding Berlioz's horn writing is the process of discerning the thought behind his crook choices. Dauprat offers an external way (written out) to view this problem. In Volume Three of his *Method*, Dauprat has written out the scales each crook works

[119] Rushton, *Berlioz: Roméo et Juliette*, p. 6.

best with. The tonal outline of *Roméo et Juliette* and Berlioz's horn crook choices are presented side by side in Table 6-1. Following, in Table 6-2, is a list of keys and Dauprat's recommended crooks to use in those keys. It is possible to understand Berlioz's crook choices by comparing these two tables. Looking at Part One, for example, the horns are in E, E♭, G, and F. If one looks at Dauprat's information in the following table, these observations may be made: three combinations of Berlioz's chosen crooks have good scales in D major, F major and G major; two combinations of his chosen crooks have good scales in b minor, a minor, E major, and A major; these keys are all represented in part one. This method works well to understand Berlioz's crook choices. As another example, the final crook choices are two horns in D, a horn in E, and one in F. The D and E crooks have good scales in both B major and b minor. The F crook has a good scale in b minor and E♭ major. All three have good scales in D major. All of these keys are represented in the final part of the piece. While Berlioz did not have the information written out in his *Treatise* like Dauprat did, Dauprat's information helps make clear how Berlioz may have thought about choosing crooks to maximize open notes and have the option of melodic function.

The instructions found in Berlioz's *Treatise* do seem to represent his previous compositional practice as found in *Roméo et Juliette*. He kept the weaker and more difficult stopped notes to a minimum and was somewhat careful how he approached these and other challenging notes. He relied on pairing stopped notes with other more open notes in other horn parts or with other instruments altogether. He took Dauprat's adamant recommendation to utilize horns in different keys seriously and wrote quite cleverly for the horn section as a versatile unit. The one area where he did not take his own advice: horn solos. He said "the horn is a noble, melancholy instrument, yet the expressiveness of its tone and sonority does not mean there are types of music in which it cannot take part. It blends well in the harmonic ensemble and even the

Table 6-2: Table of keys with best crooks to use for that scale[120]

Key	Horn crooks that have fairly good scale in key
CM	C basso & alto, D, E♭, F, G
cm	B♭ basso & alto, E♭, F, A♭
DM	D, E, F, G, A
dm	B♭ basso & alto, C basso & alto, D, E♭, F, G
E♭M	B♭ basso & alto, E♭, F, A♭
EM	D, E, G, A, B♮(basso)
em	C basso & alto, D, E, F, G, A
FM	B♭ basso & alto, C basso & alto, D, E♭, F, G
fm	E♭, F, A♭
GM	C basso & alto, D, E, F, G
gm	B♭ basso & alto, E♭, F, G
A♭M	E♭, F, A♭
AM	D, E, G, A
am	C basso & alto, D, E♭, F, G
B♭M	B♭ basso & alto, E♭, F, G
BM	B♮, D, E
bm	D, E, F, G, A

[120] Dauprat, *Method*, 436-461.

least able composer can, if he wishes, make it prominent or give it an essential but less noticeable role."[121] Dauprat noted that there was a lack of solo music in the literature. He commented repeatedly that with the continuing development and refining of horn technique the horn was primed to take a more prominent place as a soloist. But Berlioz did not write any true solos for horn in *Roméo et Juliette*. According to Macdonald, "the only real horn solo in Berlioz's music is the accompaniment to the song *Le jeune paysan breton.*"[122] Berlioz was writing for some of the best horn players in the world at the time. His horn writing is clever and well-conceived, but from a horn player's perspective he almost never gave his full confidence to the horn.

[121]Berlioz, *Berlioz's Orchestration Treatise*, 176.

[122] Ibid., 180.

Chapter 7: CONCLUSIONS

Berlioz's *Grand Traité d'Instrumentation et d'Orchestration Modernes* was in some ways not so modern. Macdonald talks about Berlioz's choice of examples in his commentary:

> The predominance of passages from Gluck, who had been dead for nearly sixty years when the *Treatise* was written, contradicts his claim to be propounding *modern* orchestration. Sacchini and Spontini, whose music was already almost forgotten, are cited with approval. Beethoven and Weber were familiar but no longer modern. Gluck was the model from which Berlioz learnt his orchestral sensibility and this, he would assert, was not subject to the vagaries of fashion or mechanical science. Berlioz's ideal was to apply Gluck's incomparable sense of dramatic aptness to modern instruments.[123]

Berlioz, while frequently citing Gluck in his *Treatise*, says: "the horn is the orchestral instrument for which Gluck wrote least well; a glance at any of his works will suffice to show his limitations in this field."[124] Berlioz's ideas about orchestration and instrumental colors may have been ahead of his contemporaries, but the core of his ideas were firmly rooted in the past. It is clear that Berlioz read and absorbed Dauprat's *Method*. He presented information from Dauprat in the horn chapter of his *Treatise* but modified it with his own compositional experience.

Berlioz's writing for horn in three to four different keys was espoused by Dauprat twenty years previously and was by no means a new idea. In Dauprat's Op. 10, *Sextet No. 1*, he writes for six horns in C alto, G, F, F, D, and C basso. In a short 5-measure excerpt, both Dauprat's solo writing and use of difficult stopped notes can be seen. The line is marked *dolce* as he writes a beautiful singing melody for the C *alto* horn. Below, for the C *basso* in m. 28, he writes a d^{1}. From personal experience I can say it is a difficult note at best; on a long horn like the C *basso*, it

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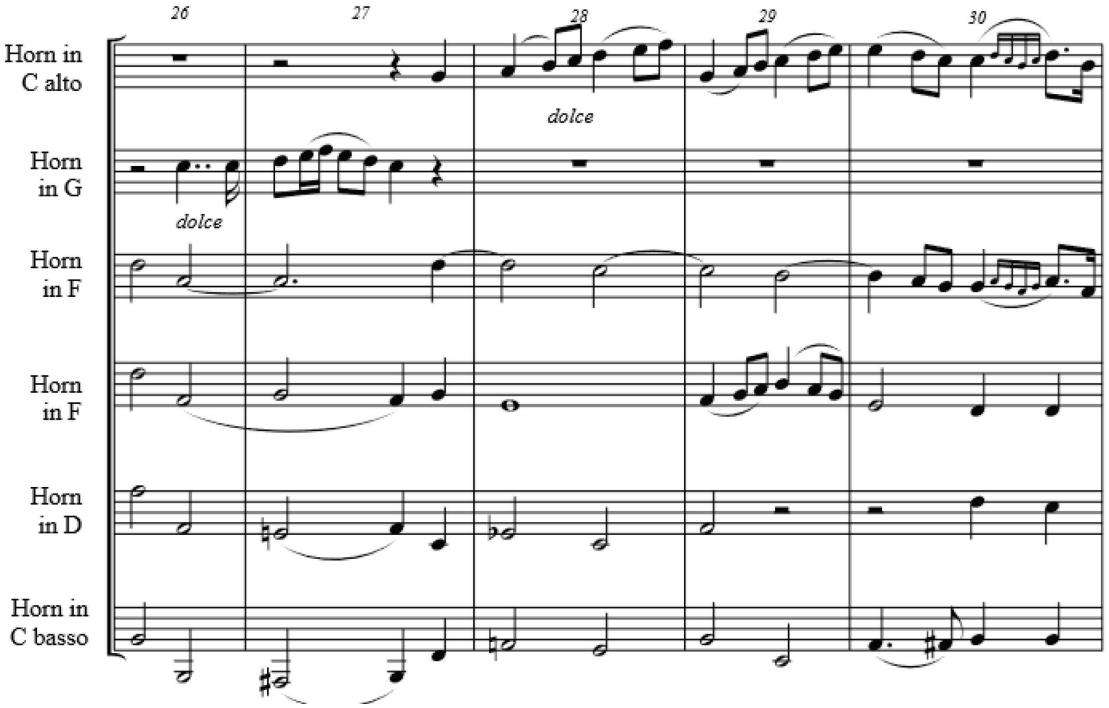
[123]Berlioz, *Berlioz's Orchestration Treatise*, xxx.

[124] Ibid., 176.

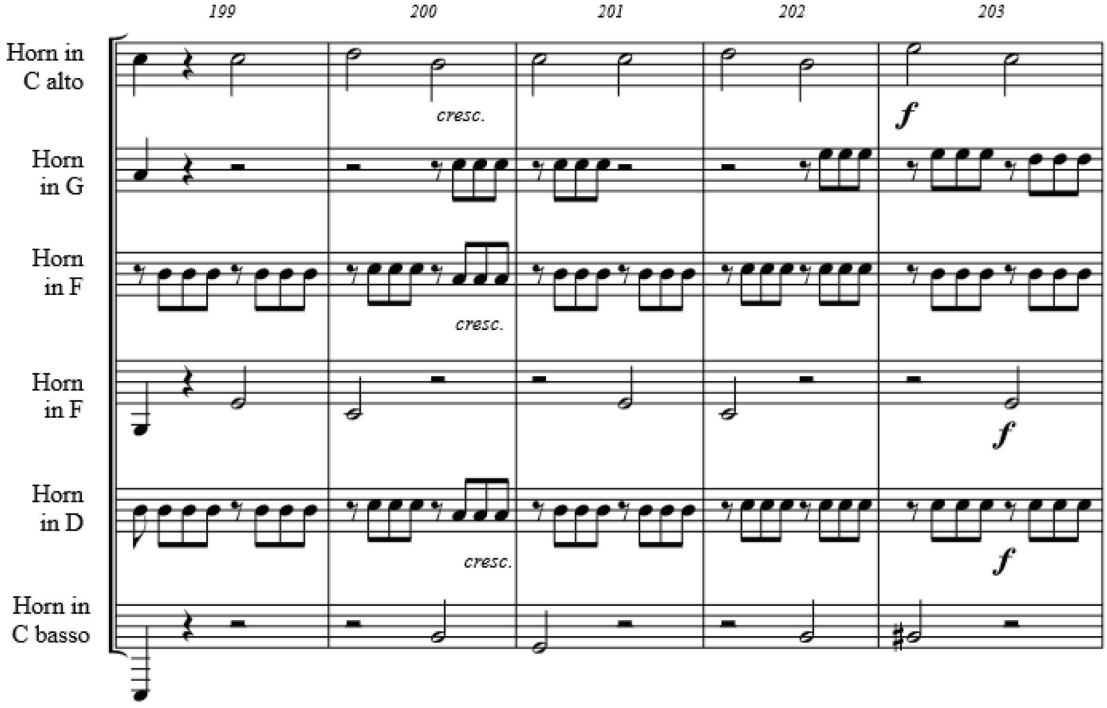
becomes quite challenging. While the d^{1} is doubled on an open note by the horn in D, Dauprat did not feel the need to omit the difficult note nor to break the line to avoid it.

Example 7-1: Dauprat's Op. 10, *Sextet No. 1*, mm. 26-30



As seen in the previous chapter, Berlioz frequently used a hand-bell style of writing for the horn section, picking and assigning the parts of the melody to each horn that could play the most open notes in that section. In practice, this treated the horn section as one instrument, not as the four individuals playing in it. There is some precedent for this style of writing, and even Dauprat used it occasionally. In the following excerpt, he alternates pairs of half notes between the third Horn in F and the sixth Horn in C *basso* to achieve an open and penetrating sound on the bass line. Macdonald says in his commentary on Berlioz's *Treatise*, "Somewhere between the eighteenth century…and the early twentieth century…, composers began to manipulate

Example 7-2: Dauprat's Op. 10, *Sextet No. 1*, mm. 199-203



instruments as parts in a great machine, not as voices in a choir."[125] In *Roméo et Juliette*, the horns are used mainly to support harmonic structure and reinforce lines found in other instruments. When the horn is heard as a main voice, it is not as soloist, but as a unit. Dauprat believed the horn capable of more, saying, "Now that the horn has made such notable progress, it is used more often as an obbligato voice, though still not enough for the good of the instrument, for it to be used more effectively in the orchestra, and to further the confidence in his talent that a player gains when he is heard frequently."[126]

Berlioz's horn choices (keys/crooks) were guided by several considerations. Cecil Wilson, in his dissertation, *Berlioz' Use of Brass Instruments*, does extensive tabulating of types of notes used and key of horns used in Berlioz's compositions. He comments, "The challenge to

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[125]Berlioz, *Berlioz's Orchestration Treatise*, xxx.

[126] Dauprat, *Method*, 416.

Berlioz seems to have been twofold: to achieve the aural effect of chromatic flexibility with as much evenness of tonal quality as possible, and to utilize the horn when its particular tone color was desirable, in spite of its qualitative limitations."[127] The former was definitely Berlioz's priority, while using the horn despite its limitations was more of an exception (as seen in a general lack of soloistic material.) Yet, his compositions were further afield chromatically than had previously been heard, and as a consequence the horn parts are not easy for the performer on natural horn. There are difficult approaches to some stopped notes, and entrances that are hard for the performer to hear and play accurately.

Dauprat informed the practices of even a revolutionary orchestrator and composer like Berlioz. Tradition (natural horn) offered a certain set of sounds and timbres that Berlioz could understand and exploit. Even as he began to write for valved horn later, he continued to look for the sound specific to natural horn by varied instructions for stopped horn within his music. Berlioz commented, "the conclusion is simply that horn players should know the technique of hand-stopping as if the cylinder mechanism did not exist, and that composers should henceforth indicate by some special sign the notes that are to be played stopped, the player producing as open sounds only those notes which carry no such indication."[128]

We can see in both the Paris Conservatory's insistence on natural horn up to the turn of the twentieth century and in Berlioz's clear reliance on Dauprat's *Method* from twenty years previous to inform his *Treatise* and his horn writing that an understanding of natural horn and its specific timbres exerted its influence on modern horn playing. According to Morely-Pegge:

> A knowledge of the hand horn should still form the groundwork for valve horn playing, not only to enable the player to have some idea of what lay in the

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[127] Cecil Wilson, "Berlioz' Use of Brass Instruments" (PhD. diss., Case Western Reserve University, 1971), pp. 12, 14.

[128]Berlioz, *Memoirs*, 328.

> composer's mind when he wrote parts for the horn without valves, but also to enable him to correct those harmonics which are naturally a little out of tune with the tempered scale. The position of the hand in the bell, moreover, has a marked influence on the quality of the tone.[129]

Dauprat's writing strongly influenced the orchestration treatise that was studied by young composers for generations. Although the section in Berlioz's *Treatise* on natural horn became outdated and little used, the music of Hector Berlioz has remained as a part of the canon. And so too, then, has the influence of Louis François Dauprat.

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[129] Reginald Morley-Pegge, "The Evolution of the Modern French Horn from 1750 to the Present Day" (Proceedings of the Musical Association, 69th Season, 1942-1943), p. 40.

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